

[San Bernardino Co.]

**OPEN SPACE/RECREATION/SCENIC**

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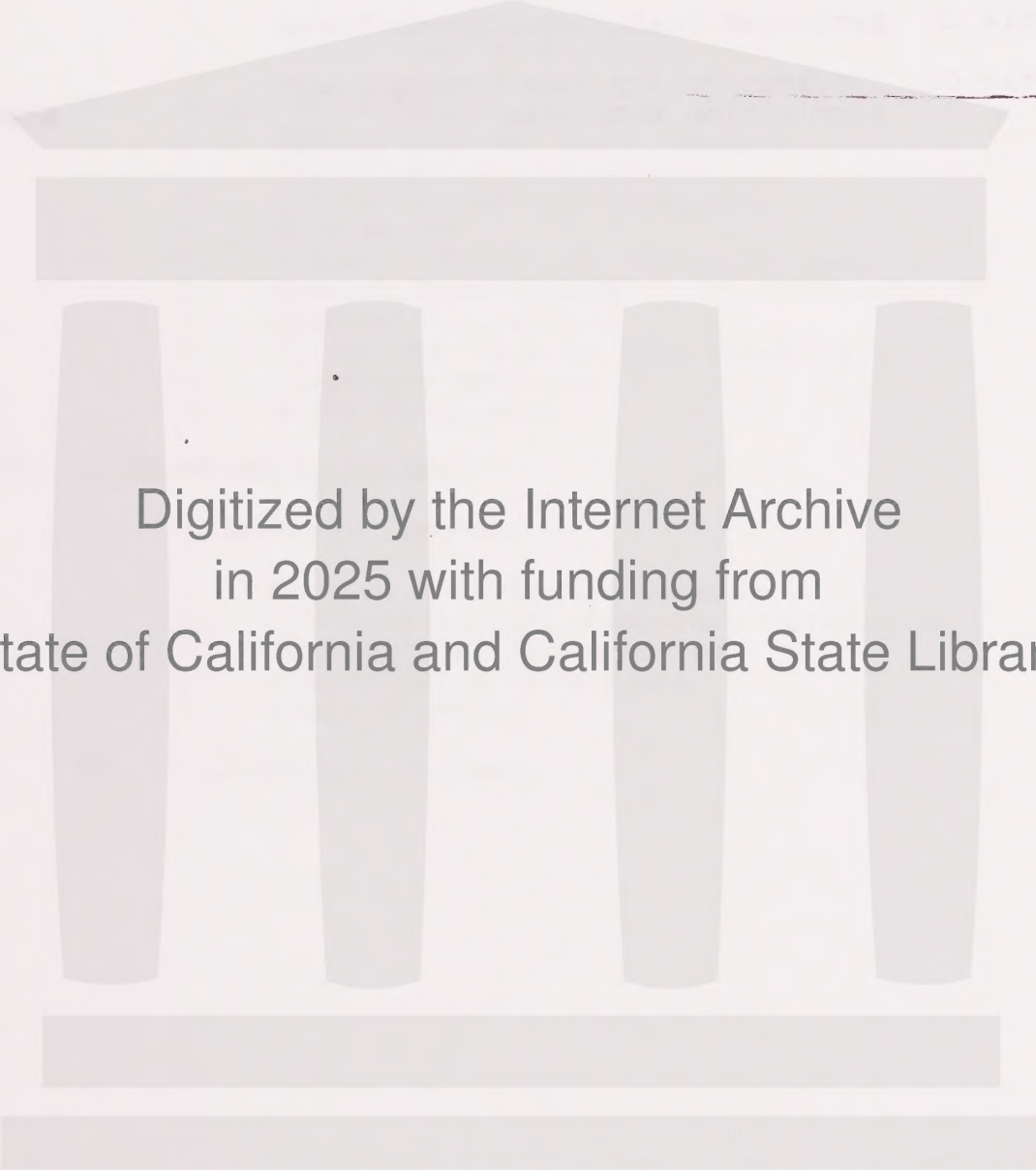
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Addendum A



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ADDENDA

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Addendum 1: Table D, Land Acquisition Cost Estimates

FIGURES

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Implementation Matrix (Follows Addendum 1)



## I. BACKGROUND INFORMATION

This section of the Open Space Background Report provides expanded information on some open issues which is not included in the Open Space Element, as well as a bibliography of information sources noted in the Element.

For detailed information on specific issues, such as biology or hazards, the General Plan Background Reports on those topics should be consulted.

### A. MAJOR OPEN SPACE AREAS

Although a detailed inventory of existing open space areas in the County is not included in this Background Report, the following is a general description of the major areas which have been identified in the initial research already conducted. More detailed descriptions will be identified as the planning process continues.

In general terms, the County can be divided into three distinct areas: Desert, Mountain, and Valley. The following is a brief description of these areas, followed by a more focused examination of sub-areas within these broad regions.

#### 1. Desert Areas

The vast majority of land within the County can generally be categorized as "desert." As regards these areas of the County, the sheer vastness of the desert, which is one of its most striking assets, may also serve to diminish the perceived importance of protecting its resources. It is likely that, in the view of many citizens, both in the desert and other portions of the County, there is "desert to spare," although this is not the case; in fact, the desert is under substantial pressure from development and man's uses.

Since they are physically separated from the urbanized portions of the County and are markedly different from other areas (both in physical features and in regulatory/political character), the Desert region has been provided with specific policies to address the issues present there.

## 2. Mountain Areas

The San Bernardino mountains serve as a significant resource of natural lands, an important scenic backdrop, and a physical barrier between the Desert and Valley regions. Like the desert, the mountain areas of the County are worthy of special consideration and policies to deal with issues unique to the area (as has already taken place in the adoption of a number of Community Plans dealing with various mountain areas).

The mountain areas in the County receive the majority of the snowfall which occurs in the County, adding to their importance as wildlife habitat (since similar climates are not available elsewhere), making them both an important portion of the local water supply system, and adding to their value as a regional recreation destination.

The mountain areas also contain a substantial inventory of special, threatened, and endangered species. The three-spined stickleback fish, discussed in the Open Space Element and the General Plan Biological Background Report, is only one example of a number of critically endangered species and habitats which exist in very limited numbers only in the mountain areas.

## 3. Valley Areas

Although decades of development have substantially altered the character of the Valley areas and removed many open space areas, this portion of the County is of considerable importance for several reasons.

The Valley areas of the County are very important to the success of the County's open space plan for the simple reason that the majority of voters who may ultimately be asked to fund open space acquisition and management reside in Valley communities. These voters were responsible for the recent adoption of an increased sales tax to fund transportation improvements (desert area voters did not support the measure by the required two-thirds majority), and must be accounted for in any effort to build support for an open space system.

The fact that the majority of County residents reside in Valley areas also adds to the importance of providing open space and recreation opportunities in this region. Open space lands of all types in this region will be more visible and accessible to a large number of persons than areas in the deserts or mountains.

And, while the majority of open areas in the Valley region

have been eliminated through the process of development, this dearth of natural areas adds to the importance of the remaining areas. One habitat still found in the Valley region, "Riversidian sage scrub," has attracted the attention of Nature Conservancy, which recently visited several remaining areas with this habitat type to determine whether purchase of lands by that group should be pursued.

The placement of the Valley between several large expanses of open space--the mountains to the north and the Chino Hills and Cleveland National Forest to the south and west--also makes this area important in terms of providing linkages between these areas (for recreation patrons and wildlife).

The following major sub-regions have also been identified:

#### 4. Chino Hills

The Chino Hills serve a number of open space purposes. The Chino Hills State Park is a major recreational resource, and provides protection for a number of sensitive biological resources. This sub-region is also located near several other important open space areas which combine to make the southernmost portion of the County a major open space resource.

The Open Space Map of the Resources Overlay indicates a wildlife corridor zone connecting the Chino Hills State Park with other major open space areas.

#### 5. Prado Basin

Although located primarily outside the County, the Prado Basin is a significant reservoir of riparian habitat, and provides habitat for a number of species, including the endangered Least bell's vireo, which requires specific types of willow habitat found within Prado Basin. The open space plan should recognize the importance of this open space resource, and its value to both wildlife and the public.

#### 6. Chino Agricultural Preserve

As noted elsewhere in this Background Report, the Chino Agricultural Preserve is of great importance to the County, which benefits from the significant dairy industry located here. The Agricultural Preserve represents the largest, most active agricultural region in the County, a status which has already been reflected in the actions of the Board of Supervisors to retain agricultural uses at least through 1997.

The Open Space Map of the Resources Overlay indicates the general location of the Chino Agricultural Preserve.

#### 7. Crafton Hills

As an "island" of open space in the midst of several rapidly expanding communities, the Crafton Hills are important both as a potential recreational destination and as a reservoir of habitat for wildlife. Support for the creation of an open space area in the Crafton Hills has already been expressed by the Cities of Yucaipa and Redlands and the County, adding to the potential that this area can be included in the Countywide open space system.

The Open Space Map of the Resources Overlay indicates two policy area in the general location of the Crafton Hills--one area is intended for specific application of agricultural preservation actions, the other indicates an area which is desired to remain in open space uses.

#### 8. Santa Ana River

The Santa Ana River, which provides a major physical link between the mountains and the Prado Basin (and ultimately to the Pacific Ocean), should be a major element in the open space plan. Planning is already under way to establish a multi-use trail along the Santa Ana River from its headwaters in the San Bernardino Mountains to the Pacific Ocean; the open space plan should also recognize the importance of the River as a wildlife dispersion corridor through the urbanized areas of the Valley region.

The Open Space Map of the Resources Overlay contains a wildlife corridor along the length of the Santa Ana River to preserve (or in some areas improve on) its function as a dispersion corridor.

#### 9. Mojave River

As one of the few perennial watercourses in the Desert region, the Mojave River is critically important to many wildlife species. Although a nature preserve has already been established along a portion of the river, expansion of the protected portion of the Mojave River should be considered as part of the open space planning process.

The Open Space Map of the Resources Overlay indicates that a wildlife corridor should be provided along the length of the Mojave River to preserve its function as an area for wildlife.

## 10. Big Bear Area

The area in and around Big Bear Lake contains a number of important open space resources, including several examples of important habitat found only in this area. The U.S. Forest Service, which has jurisdiction over much of the land around Big Bear Lake, is very interested in the potential to expand the protection the County can provide for these natural areas, which in many cases occur on private lands.

The Open Space Map of the Resources Overlay designates the watershed of Big Bear Lake for specific application of natural resource preservation policies.

## 11. BLM Areas of Critical Environmental Concern

The following are areas of concern identified by the Bureau of Land Management (BLM). For mapping of these areas, refer to the BLM's California Desert Conservation Area Plan.

TABLE A  
BLM AREAS OF CRITICAL ENVIRONMENTAL CONCERN

Name	Acreage	Special Values
Trona Pinnacles	6,360	One of the most outstanding examples of tufa (calcium carbonate) deposits in the nation, the area is highly scenic.
Grimshaw Lake	960	An unusual aquatic habitat, the area is home to several sensitive fish species and more than 200 species of birds.
Amargosa River	9,299	Contains aquatic habitat and vegetation, hosting the sensitive Amargosa River pupfish, Amargosa vole, speckled dace, and providing shelter to more than 200 species of birds.
Salt Creek (Dumont)	2,109	Provides critical habitat for the California blackrail, desert pupfish, and the Yuma clapper rail.

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TABLE A (Cont'd)  
BLM AREAS OF CRITICAL ENVIRONMENTAL CONCERN

<u>Name</u>	<u>Acreage</u>	<u>Special Values</u>
Clark Mountain	17,826	A scenic national landmark, rich in flora and fauna, including the largest stand of white fir in the California Desert. It contains many historic and prehistoric sites.
New York Mountains	54,750	Extensively used by universities for research, this scenic area has diverse groupings of vegetation as well as bighorn sheep.
Ft. Piute	4,175 Ft.	Contains Piute Spring and Piute Creek, one of the desert's few perennial watercourses, making the area rich in natural and cultural values.
Fort Soda	6,770	Fort Soda, on the ancient shoreline of Lake Mojave, has several salt marshes supporting the Mojave chub and Saratoga Spring pupfish. The area, containing the Old Government Road and a portion of the old Tonopah and Tidewater Railroad, has other cultural artifacts indicating human habitation for at least 9,000 years.
Afton Canyon	4,904	Highly scenic, the canyon is one of the two places the Mojave River surfaces and sustains extensive riparian habitat for raptors and bighorn sheep.
Eriophyllum	320	This site provides protection for the Eriophyllum mohavense (Mojave woolly sunflower), under consideration for listing as a threatened species.

TABLE A (Cont'd)  
BLM AREAS OF CRITICAL ENVIRONMENTAL CONCERN

<u>Name</u>	<u>Acreage</u>	<u>Special Values</u>
Harper Dry Lake	480	The area contains a quality marsh habitat for birds, including two endangered species--the Yuma clapper rail and bald eagle.
Mojave Fishhook	640	The extremely rare yellow-spined form of the cactus <i>Sclerocactus</i> is found in this area.
Upper Johnson	310	The valley has unusual groupings of the ancient Mojave yucca.
Soggy Dry Lake	278	The site includes unusual plant groupings of creosote bush rings, which may be the world's oldest living plant.
Big Morongo Canyon	3,186	The canyon is a desert oasis with perennial water flowing over three miles, supporting extensive riparian vegetation. At least 235 species of birds have been observed.

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## 12. SCAG Open Space Areas of Regional Significance

As part of its 1975 regional plan of open space areas, the Southern California Association of Governments identified a number of areas within San Bernardino County as critical open space areas.

These areas, which are listed below, are mapped in SCAG's 1975 plan, although the level of detail is in many cases not specific enough to provide useful planning information. Many of these areas have also been identified by the Bureau of Land Management and the U.S. Forest Service.

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TABLE B  
SCAG AREAS OF REGIONAL SIGNIFICANCE

<u>Area</u>	<u>Significant Resources</u>
Amargosa	Seasonal stream with desert riparian habitat. Some permanent pools. Special wildlife include Tecopa pupfish and relict crayfish. Dumont dune adjacent to river provide specialized dune habitat.
Amboy Crater	Volcanic crater and associated formations. Habitat for <i>Microrionata rowelli amboriana</i> , a relatively rare gastropod.
Big Bear Lake and Surrounding Area	Large artificial lake, surrounded by ponderosa forest. Very heavy recreational use.
Bighorn-Whitewater Area	Large area of approximately 254,000 acres, mostly in public ownership. Mixed joshua tree, pinon pine, and juniper woodland.
Cable Canyon Creek	Vegetated canyon in low foothills. Riparian chaparral habitat.
Cadiz Dunes	Area of natural dunes used by off-highway vehicles.
Cajon Creek	Permanent stream in dry brushy mountain pass. Chaparral and some riparian vegetation.

TABLE B (Cont'd)  
SCAG AREAS OF REGIONAL SIGNIFICANCE

<u>Area</u>	<u>Significant Resources</u>
Calico Recreation Lands	208,000 acres, approximately 1/3 private. Prime areas include: Black and Opal mountains (including petroglyphs), Rainbow Basin (fossil area, National Natural Landmark), Calico Ghost Town Regional Park, Joshua View (rich Joshua tree woodland), and Calico Early Man site. Entire area heavily used and vandalized.
Chemehuevi Mtns.	Good example of desert mountain wilderness. Geologic and biologic values above average.
Chino Hills	Grassland and oak woodland habitat.
City Creek	Permanent stream in dry area. Riparian area.
Clark Mountain	23,000 acres of BLM land closed to OHV use.
Colorado River	Nevada state line to Lake Havasu. Extraordinary "combination" stream of cold and warmwater fish and riparian habitat. Wildlife along entire portion of river in San Bernardino County includes: Yuma clapper rail, Bighorn sheep, Humpback sucker, Bonytail fish, Colorado squaw fish. Topock Gorge is a special area of significance in this stretch of river--good example of Tertiary volcanics, as is Redrock Gorge.
Coxcomb Mtns.	Relatively undisturbed desert ecological area, supporting desert tortoise and Bighorn sheep.
Cucamonga Canyon Mylonites	Geologic area, large mylonite crystals. Chaparral and Bigcone douglas fir.

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TABLE B (Cont'd)  
SCAG AREAS OF REGIONAL SIGNIFICANCE

<u>Area</u>	<u>Significant Resources</u>
Death Valley National Monument	Portion in San Bernardino County. National Extraordinary wildlife and geologic values.
Eastern Mojave Recreational Lands	Total of approx. 825,000 acres, mostly public ownership.
Fort Piute and Piute Springs, Piute Creek and Piute Range	6,000 acre area, containing historic ruins of fort built to protect wagon trains from Indian attack. Running spring provides significant habitat supporting the Mojave chub <i>Gila bicolor Mojavensis</i> in Piute Creek.
Fort Soda (Zzyzk Springs)	Contains the only naturally occurring population of Mojave chub.
Grapevine Canyon	28,000 acres on northern flank of San Bernardino Mountains, habitat ranging from pinon forest to high desert types.
Indian reservations	Located along Colorado River.
Joshua Tree National Monument	Portion located in San Bernardino County.
Jurupa Hills	Isolated hills north of Santa Ana River. Riparian and sagebrush habitat.
Kingston Mtns.	12,000 acre area with archaeological and natural values. Habitat for desert tortoise and Bighorn sheep.

TABLE B (Cont'd)  
SCAG AREAS OF REGIONAL SIGNIFICANCE

<u>Area</u>	<u>Significant Resources</u>
Lake Arrowhead and Surrounding Area	Artificial lakes in pine forest. Wildlife species being displaced. Area drains into Lahontan groundwater basin, posing water quality problems.
Lanfair Valley	Large high desert valley--approx. half in public ownership. Joshua tree woodland in good condition.
Lower Lone Pine Canyon	Riparian, sage, and chaparral habitat.
Lytle Creek	Permanent stream, riparian vegetation.
Mill Creek Canyon	Private and public lands important for recreation.
Mount San Antonio	10,064-foot peak in San Gabriel Mountains. Alpine vegetation, Bighorn sheep, limber pines.
Military lands	Very large holdings.
Mojave River	Annual stream from Lake Arrowhead to Soda Dry Lake runs mostly underground, surfaces at Mojave Narrows and Afton Canyon. Desert riparian waterway.
Old Woman Mtns.	116,000 acres. Considerable mining and prospecting in areas. Bighorn sheep, mountain lions, juniper woodlands. Some recreation use.
Oro Grande Wash	Original cement mine in California; kiln still exists. OHV use.
Owlshead	Scenic mountain valley and lake area with little evidence of use by man.

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TABLE B (Cont'd)  
SCAG AREAS OF REGIONAL SIGNIFICANCE

<u>Area</u>	<u>Significant Resources</u>
Pisgah Crater	Volcanic formation, biotic communities on recent basaltic formations. Located in Twentynine Palms Marine Base.
Pinnacles Geologic Area	Peculiar rock formation, possibly volcanic. Chaparral, some Coulter pine.
Quaking Aspen Stand	Isolated stand of quaking aspen, southernmost in U.S., partially protected by San Gorgonio Wilderness.
Rodman Mtns.	454,000 acres. Excellent archaeological values in eastern portion. Heavy recreation and OHV use. Prime habitat values.
San Bernardino Mountains (All)	Rugged to rolling mountain area. Habitat for Bighorn sheep, puma, and bear.
Santa Ana River Headwaters	Many dendritic streams. Riparian vegetation.
Santa Ana River	Vegetated wash in foothills. Riparian vegetation in lower reaches cleared for flood control. Permanent water flow.
San Gorgonio Wilderness	Rugged mountain area. Contains Mt. San Gorgonio (11,502 ft.), highest point in Southern California. Mixed conifer and alpine vegetation. Bighorn sheep habitat.
San Timoteo Wash	Vegetated wash in foothills, riparian habitat.
Silverwood Lake	Large reservoir, wintering habitat for Bald eagle.

TABLE B (Cont'd)  
SCAG AREAS OF REGIONAL SIGNIFICANCE

<u>Area</u>	<u>Significant Resources</u>
Primitive Areas	Lava and Argus mountains. Geothermal and wildlife values.
Sacramento Mtns.	Rugged desert mountain wilderness.
Sheephole Mtns.	Mining and recreation land. OHV area adjacent to Joshua Tree National Monument.
Trona (tufa) Pinnacles	11,000+ acres. Best example of tufa formations in North America. Supports Mojave ground squirrel and desert tortoise. Geothermal values.
Turtle Mtns. and Mopah Peaks	97,000 acres. Highly scenic, outstanding geologic values, exceptional biological and ecological values.
Whipple Mtns.	110,000 acres, 95,000 public. Outstanding geologic and natural values. Supports Bighorn sheep and burro deer.

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## B. AGRICULTURE

Agricultural lands currently comprise an important part of the existing open space system in San Bernardino County. Located in many cases adjacent to or within urbanizing areas, agricultural lands provide not only economically valuable crops, but also serve as resources of "open land," defining the edges of cities and providing aesthetic values. This section of the Open Space Background Report examines a number of issues related to agriculture, and discusses how agricultural lands can fit into a Countywide open space strategy.

### 1. Agriculture in San Bernardino County

Farming is one of San Bernardino County's most important industries. According to the most recent report on the County's agricultural production (1989), the total value of agricultural products produced in the County exceeded \$630-million.

A wide variety of crops are currently produced in the County, ranging from small amounts of specialty crops to millions of dollars of dairy products. In terms of dollar value, milk production--concentrated in the Chino Agricultural Preserve--remains the largest component of the farm economy. Milk production in 1989 accounted for more than 63 percent of the County's agricultural output, producing products valued at more than \$400-million. Despite attempts by the federal government to reduce milk production (encouraging farmers to accept cash subsidies in return for agreeing not to operate), the number of producing milk cows in the County increased in 1989 to a total of 183,000. This historically high number of cows (only slightly higher than in recent years) continues to make the Chino Agricultural Preserve the highest concentration of cows in the United States.

Agriculture in San Bernardino County, despite the robust health indicated by the value of crops it produces, is approaching a crossroads. The booming construction of homes and businesses, which owes its distant roots in part to land speculation sparked by citrus industry, in many areas threatens to overrun the County's remaining farmland.

Indeed, a review of aerial photographs taken in the mid-1970s with maps of existing (1989) farmland dramatically illustrates the fast pace at which conversion of farmland to urban uses has taken place. In many foothill communities, such as Upland, citrus districts operating in the 1970s have been

completely replace by residential subdivisions. The same pattern is echoed elsewhere, particularly in cities closer to Los Angeles and Orange counties.

The Chino Agricultural Preserve, by comparison, has remained virtually intact over this same period (and, as noted above, has actually seen an increase in activity). This is in part due to the imposition of land use controls by the County of San Bernardino which limit uses in the Preserve to those which are related to agriculture. Still, the Preserve's long term future remains somewhat uncertain, despite heroic efforts to maintain the dairy industry.

In a recent decision, the Local Agency Formation Commission (LAFCO), a regional agency which arbitrates the decisions of cities to expand their limits (and the areas to which they will provide city services) requested that the cities of Chino and Ontario reach an agreement on the extension of their influence areas into the Preserve. And a major residential development project, Archibald Ranch, at the northernmost edge of the Preserve, has been variously decried and heralded as the first step in the conversion of the Preserve to urban uses. Despite the County's stated intention to retain agricultural uses in the Preserve until at least 1997, differences in opinion exist between farmers wishing to remain and those who would take profits from the sale of their land (at higher urban values) and re-establish dairies elsewhere.

As part of Proposition 70 bond issue approved by voters in 1988, a total of \$20-million was made available to purchase land in the Preserve with the ultimate aim of maintaining agricultural uses. The Southern California Agricultural Land Foundation has been contracted by the County to administer the acquisition of lands, but to date no properties have been purchased. Ontario Mayor James Fatland, who is a member of the foundation's board of directors, has stated that options are now being examined which will allow the \$20-million to provide the most effective protection for agriculture.

## 2. Effects of Growth on Agriculture

The experience of the Chino Agricultural Preserve illustrates a land use dynamic which affects land at the edge of an expanding urban area: in general, as land becomes suitable for uses more intensive than agriculture, its value increases. And, as the value of the potential uses increases, so does the value of the land.

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In the Chino Agricultural Preserve, this has resulted in sharp differences in land value between areas just outside the Preserve (where city services and zoning allow higher-value residential and commercial uses) and areas within (where agricultural restrictions and lack of city services keep land values low). This difference in land values is cited by some dairymen as evidence that they should be allowed to convert their farms to other uses.

This phenomenon is by no means limited to Chino, however. The experiences of farming communities throughout California and the U.S. indicate that, in general, expanding urban areas create conditions at their edges which encourage the further conversion of farmland, thus establishing a new fringe, where the process is repeated.

This pattern is the end result of a number of effects which the expansion of urban areas has on farming. Based on research conducted by the American Farmland Trust, these effects can be grouped into general categories:

"Rurbanization"

The effect of "rurbanization" occurs in areas which are in the early stages of conversion from agriculture to other uses. Basically, a rurbanizing area is marked by a switch from fairly large parcels of a size sufficient to support farming operations (generally larger than 20 acres, but larger for some crops) into smaller units. According to the U.S. Department of Agriculture's Soil Conservation Service, California presently contains almost two million acres of this type of "rurban" or "ranchette" development, in addition to 3.2 million acres of "urban" land. In a study of the Bay Area, it was determined that one acre of land was transformed into a "ranchette" for every acre directly removed from production for development purposes.

In theory, these smaller parcels are established to allow their sale to individual owners who will continue to farm and experience a "rural" lifestyle. In practice, however, these parcels too frequently divide the land into pieces too small to be effectively farmed. The land is taken out of production, often leading to pressures on the local jurisdiction to further subdivide the land into smaller parcels, which are in turn sold to more owners, increasing the urbanization of the land.

### Air Quality

Much attention has been paid in recent years to the effects of air pollution on humans. Air pollution's effects, however, are not limited to those it has on humans. Studies conducted by the California Air Resources Board have indicated that damage to crops resulting from high levels of ozone (a major component of smog) result in \$333-million in lost revenues each year. Citrus production can decline by 20 percent in the presence of urban levels of ozone; other crops experience drops in production of more than 35 percent at the same level of air pollution. Acid fog, formed when airborne pollutants are distilled out of moisture in the air, can also damage the leaves of all plants, reducing farm yields.

### The "Impermanence Syndrome"

As discussed above, rising land values at the urban fringe often lead to the subdivision of land in expectation of its later sale at a higher value. This expectation of imminent sale is considered by many experts to contribute to the "impermanence syndrome," which describes a decline in farm investment as conversion to other uses becomes apparent. For instance, a farmer expecting to sell his land in a few years would be unwilling to make a long-term investment in new equipment.

While this phenomenon is accepted by most observers, and appears to be substantiated by anecdotal evidence, some researchers have examined farmland data nationwide which suggests that the opposite is true: that rising land values may encourage investment. These researchers suggest that, on a nationwide level, farmland data suggests that rising land values encourage not conversion to other uses but to higher value crops (from hay to vegetables, for instance). Rising land values, according to these researchers, provide these farmers with the means to finance the capital investments in equipment and labor to convert to higher value crops.

Even if this new theory is substantiated, it may not accurately describe conditions in San Bernardino County. At any rate, it appears clear that farmland in the County--specifically, farmland at the urban fringe--is in danger of conversion to urban uses.

### Vandalism and Other Conflicts

Quite apart from the commonly held notion of the "family farm," modern agriculture is an industry which relies on modern practices to achieve maximum productivity. In many cases, these practices involve side effects acceptable in sparsely populated areas, but objectionable in urban areas. These include the creation of odors, flies, and noise (from equipment which often runs continuously or at late night and early morning hours) which affects residents near farms.

These nuisances generally result in complaints from nearby residents, which often result in pressures on the farmer to reduce the nuisances. The end result can be a drop in farm productivity as the result of increased regulation.

Urban areas can also directly affect farm output simply by increasing the number of persons adjacent to farms who may view farmland either as a recreational area or as a convenient outlet for criminal vandalism.

### 3. Effects of Agriculture on Wildlife

A substantial portion of the undeveloped open land remaining in the Valley portion of the County is occupied by farmland. And, while these lands represent a substantial resource, it should be noted that agricultural lands generally have a low value as wildlife habitat.

As noted by wildlife biologist James Shaw, "Of all human activities, none have had more impact upon wildlife than agriculture. . . . One generalization stands out clearly: the suitability of farmland for wildlife declines as intensity of agriculture increases."

As happens in the "island habitat" situations discussed earlier, both the number and diversity of species declines as farming increases. One study of bird species in Illinois found that the diversity of species had dropped considerably in this century, from an earlier situation in which 18 species comprised 70 percent of the bird population, to the present day, when only 9 species made up this same portion of the population. Similar results have been noted in other studies.

In terms of creating a Countywide plan of open spaces, therefore, it must be recognized that farmland, while serving

some open space functions, has only a limited value as wildlife habitat. Nevertheless, some measures are available which can increase the value of farmland as habitat.

In general, these measures relate to the creation of those aspects of the natural world--trees, protected places, brush and scrub--which may be lacking in farming areas. For instance, the creation of an untilled area at the boundary of a field (which may include a drainage or irrigation canal) can serve as a wildlife corridor, allowing animals to pass through farming areas. The creation of alternative crop layouts, such as triangular fields, can also provide more of the "edge" habitat which wildlife seeks out, although this type of field is somewhat more difficult to manage.

These physical changes in the structure of farmland, of course, do not change the far-reaching effects of farming which result from the extensive use of pesticides, herbicides, and chemical fertilizers. However, it should be noted that recent research has validated the use of natural wetland areas (native or re-created by design) to remove toxic chemicals from urban run-off.

According to one study, a properly designed wetland area can remove 80 to 100 percent of suspended solids (sediment), 60 to 80 percent of phosphorus, and 40 to 80 percent of total nitrogen (the removal of these chemicals helps prevent the formation of excess algae). The same basin can also stabilize 60 to 80 percent of trace metals. The removal of excessive nitrogen would be of particular value in the Chino Agricultural Preserve.

#### 4. Agricultural Protection Policies

As discussed above, the County of San Bernardino has already adopted a strong farm protection policy, in the form of the Board of Supervisors' decision to retain agricultural land use restrictions in the Chino Agricultural Preserve.

The County's existing policies related to agricultural land preservation are discussed in an earlier section of this report. The following partial listing of other alternative strategies developed by the American Farmland Trust is presented to suggest a range of alternative strategies which could be implemented by the County to increase the effectiveness of its agricultural preservation policies.

Ensure Conformance of County Land Use Policies with  
Agricultural Preservation

Although County land use policies presently designate large areas for land uses which include agriculture (particularly in sparsely developed regions of the County), other policies also allow the establishment of a wide range of conflicting uses, including residential developments on relatively small lots (see the "rurbanization" discussion above). These policies result in part from the desire of landowners in the County to retain the option to establish non-agricultural uses on their land. However, the end result in many cases has been the pre-emption of agricultural preservation policies with other priorities, resulting in a destruction of the agricultural value of the land. The County may wish to review its policies and determine whether a stronger or reduced commitment to agricultural preservation is desired, and where such efforts should be focused.

Revise the County's CEQA Implementation to  
Specifically Address Farmland Conversion

Much of the development taking place in the Valley portion of San Bernardino County is occurring on agricultural lands. Agricultural lands are suitable for development for a variety of reasons, including their proximity to existing cities and the general characteristics of farmland (it is generally flat, well-drained, and contains soils which are easily worked), which make it attractive as a building site.

As required by state law, many development projects are subject to environmental review, which may lead either to the preparation of a Negative Declaration of Environmental Impact Report. While state law requires an examination of potential impacts, however, the conversion of farmland is often dismissed as an acceptable impact of a project. Legislation introduced in the 1989 state legislative session (and scheduled to be re-introduced in 1990) would add to CEQA by defining the conversion of a single piece of farmland more than 50 acres in size as a "significant impact," making additional findings necessary to support the conversion. The County may wish to review whether its commitment to agricultural preservation would extend to including this type of requirements in its CEQA implementation.

### Adopt LAFCO Policies Discouraging Farmland Conversion

As discussed above, a major threat to the continued viability of farmland is the extension of city boundaries and services into agricultural areas. The extension of city limits and their attendant road system, water and sewer networks, and other amenities, generally makes land suitable for conversion to urban uses.

As the governing body charged with approving the extension of city and service limits (including the limits of water and sewer districts), the Local Agency Formation Commission frequently makes decisions affecting the conversion of farmland to other uses. By approving an extension of city services into a farmland area, for instance, a LAFCO may be giving de facto approval for the conversion of this land out of agriculture.

The County may wish to review whether it should take a position supporting a clear policy on the part of the local LAFCO discouraging the extension of city services into farmland areas unless specific findings can be made (for instance, that no other undeveloped land is available within a city for a given use). The LAFCO in Solano County, for example, has adopted specific policies which require the examination of a number of criteria, including soil type and productivity, and which seek to prevent development of farmland and encourage in-fill development in urban areas.

### Support the Formation of Agricultural Land Trusts

While the County has supported the formation of a land trust to administer the \$20-million received from Prop. 70, this same type of organization could be encouraged in other areas of the County. Land trusts can provide additional opportunities for farmland protection if they are established as tax-exempt charitable land conservation organizations.

According to the American Farmland Trust, more than 60 land trusts have been formed in California, including 15 which are intended specifically to preserve farmland. One such trust, in Marin County, has purchased or accepted donations of more than 11,000 acres of farmland.

### Promote the Local Farm Industry

In some California counties, specific marketing efforts have been made to build public awareness of and support for agriculture and farmland preservation. The counties of Fresno, Placer, Yolo, Sonoma, and Sacramento each have programs in place which sponsor agricultural fairs and events aimed at informing the public of the value of agriculture. This type of education is especially important if the preservation of farmland is included in any type of funding mechanism placed on a ballot in the County--voters must be informed about the benefits which will accrue to them if they are to support an increase in taxes or assessment.

Part of this information program could include educating the public and decision-makers about the costs and benefits of converting agricultural land to other uses. For instance, the American Farmland Trust has concluded, after reviewing a number of studies, that

"One . . . finding is that farmland loss can cost local government (and therefore taxpayers) money. Development is not always a boon to the local economy, despite the popular notion that it is. . . . agricultural land, unlike residential property, adds little to the cost of public services. Farmland conversion also brings environmental effects: air pollution, flooding, as well as loss of scenery, wetlands, and wildlife."

Providing this type of information to the public, if validated by studies specifically tailored to San Bernardino County's own set of land use dynamics, could be helpful in the establishment of grass-roots support for a farmland preservation program.

### Establish a "Transfer of Development Rights" (TDR) Program

The concept of transferring development rights, first suggested in the 1970s as a method to preserve historic downtown structures by allowing landowners to capitalize on their property's potential without rebuilding, has also been recognized as an effective farmland (and open space) protection strategy. In general, the concept of transferring development rights is simple: the landowner essentially "sells" the development rights to his property to either a land bank or another landowner. For instance, a

landowner with land suitable for development of ten single family homes could sell the development rights to build these homes to another landowner, who could add these units to those he could otherwise build on his "receptor" parcel.

The advantage to a "TDR" program is that the cost of purchasing development rights is generally lower than buying land outright. However, if a public agency is the purchaser of the development rights (rather than another landowner directly), it must be decided whether this agency will simply buy the rights or serve as a "bank," reselling them to a third party. If the public agency is formed to simply purchase development rights, renewable funding must be available; if the agency intends to re-sell the purchased rights, "receptor" areas capable of supporting increased development densities must be identified.

A related concept is the "conservation easement," which is purchased (or accepted as a donation) by a public agency. The conservation easement also eliminates the development potential of the land, although the development rights are not transferred to another parcel.

Although each requires careful management and the implementation of specific policies and programs, these methods can be effective. The American Farmland Trust reports that Marin and Sonoma counties, working with local groups and trusts, have purchased development rights on more than 15,000 acres of agricultural land. The funds provided to the County as part of Proposition 70 (discussed above) can be used for this type of program, as well as for the outright purchase of land.

It should be noted, however, that purchases of development rights or conservation easements can have negative effects. As discussed earlier, for instance, rising land values, which are generally viewed as a threat to farming, can also provide a windfall of potential capital to a farmer. As land values (and equity) increase, the amount of capital available to a farmer for conversion to high-value crops and changing agricultural practices also increases. While purchase of development rights or easements benefits the immediate owner, the later result is that the land will not appreciate to the same degree as land free from this type of restriction. A subsequent owner, for instance, will see much less appreciation in value, and may have less equity against which to borrow for future improvements.

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Other policy options are also available, including:

- Strengthening the County's commitment to preservation of soil resources through the actions of agencies such as the U.S. Department of Agriculture's Soil Conservation Service and the West End Resource Conservation District.
- Adopting policies regarding the allocation and preservation of water resources, specifically supporting policies which seek to provide adequate water supplies for agriculture.

These and other options will be explored and included where appropriate in the Expanded Open Space Element.

#### 5. Southern California Agricultural Land Foundation

As discussed earlier, the County has contracted with the nonprofit Southern California Agricultural Land Foundation to administer the \$20-million received by the County under Proposition 70. The function of this Foundation will be to protect the dairy operations in the Chino Agricultural Preserve from encroachment by urban uses and ultimate conversion out of farming.

Based on discussions with County officials and the Foundation, it appears that a substantial opportunity exists to coordinate its efforts with other Countywide open space preservation efforts. This is of particular importance to the Foundation, since the \$20-million provided under Proposition 70 is not enough to achieve the overall objective of preserving the Chino dairy industry.

## II. INFORMATION REFERENCES

This section of the Background Appendix provides a reference to information sources for open space information and mapping. In some cases, some or all sources of information on a particular open space issue are maintained by agencies outside the County; in these cases, documents prepared by these agencies are available at County Planning.

The following list corresponds generally to the order in which information is presented in the Open Space Element of the General Plan, although letters and numbers have been changed. For information on open space issues and policy direction, please refer to the Open Space Element.

### A. Major Federal and State Open Space Resources

For the locations of these resources, refer to the Open Space Background Report. Information on the locations of these areas is shown in the U.S. Forest Service's San Bernardino National Forest Land and Resources Management Plan, the Bureau of Land Management's California Desert Conservation Area Plan, and in the Jurisdictional Control map in the Overlay map system.

#### 1. Bureau of Land Management

Areas under the jurisdiction of the Bureau of Land Management are mapped in the BLM's California Desert Conservation Area Plan.

#### 2. United States Forest Service (USFS)

The boundary of the national forests in the San Bernardino mountains are shown on the Resources Overlay. Exact boundaries of federally controlled lands within the national forest are shown on Overlay maps which provide jurisdictional control information.

#### 3. University of California Natural Reserve System

Detailed mapping of the locations of these reserves is available from the University of California system.

#### 4. National Monuments

The boundaries of national monuments are available in maps compiled by the Bureau of Land Management and the National Park Service. Some information on the boundaries

of national monuments and landmarks is contained in the "Jurisdictional Control" layer of the Overlay maps.

The boundaries of all federal features in the County (National Monuments, military reservations, and the like) have been mapped, but it should be noted that some dispute exists regarding the exact boundaries of these areas, due in some cases to the age and dubious accuracy of the original surveys used to establish the boundaries.

The locations of wildlife refuges and preserves are mapped in the San Bernardino National Forest Land & Resource Management Plan and the California Desert Conservation Area Plan. Wildlife preserves which are related to regional parks are mapped in general terms in the Regional Parks Strategic Master Plan, 2010: Our Parks Future.

Additional sources of information on sensitive wildlife areas include the University of California, which maintains wildlife reserves, and the Southern California Association of Governments, which identified significant wildlife areas in a 1975 regional Conservation and Open Space Plan.

The State Department of Fish and Game has also compiled a report, Important Sites of California's Natural Diversity - South Coast Area Special Edition (Lands and Natural Areas Project Administrative Report 90-1), which identifies and describes significant areas of natural diversity.

Other agencies which have prepared maps of biologically sensitive areas include:

- California Natural Areas Coordinating Council Inventory of Natural Areas
- California Department of Parks and Recreation Landscape Preservation Study
- National Park Service National Natural Landmarks Program
- U.S. Fish and Wildlife Service California Important Fish and Wildlife Habitat: An Inventory
- Southern California Association of Governments Conservation and Open Space Plan, published in 1975.

#### B. Nature Conservancy Preserves

Specific information on the locations of these preserves is not currently maintained by the County, but may be obtained from the Nature Conservancy.

C. Specialized Habitats on Private Lands

A listing of major areas of habitat known to occur on private lands is shown in the Open Space Element.

D. Other Natural Resources Areas of Biotic Significance

Manual maps of the locations of these features are found in a variety of documents, primarily the San Bernardino National Forest Land & Resource Management Plan and the California Desert Conservation Area Plan. Some of these features are also identified on quadrangle maps prepared by the U.S. Geologic Survey.

E. Hot Springs

Hot springs in the County have not been extensively mapped. However, a 1973 Conservation and Open Space Report prepared by the County contains a general map of known hot springs. Hot springs may also be mapped on USGS quad sheets.

F. Mountainous Terrain

The location of mountainous terrain throughout the County is not available in a single location. Mountainous areas in the Desert region are shown in a computer map database prepared specifically for that region. Where computerized mapping is not available, mountainous terrain may be determined by reviewing USGS quad sheets; no mapping specifically identifying mountainous areas has been compiled for the Valley and Mountain regions. The general locations of areas of mountainous terrain are also indicated in the County's 1973 Conservation and Open Space Report.

G. Sand Dunes

Since most dunes are located in the Desert region, two primary information sources for the resource are a special computer map database for the Desert region and the BLM's California Desert Conservation Area Plan.

In the Valley region, near the city of Colton, remnants of once-widespread dunes which continue to support threatened or endangered species are shown on the Resources Overlay. In addition, the locations of sandy soils which could create dunes are shown in soil surveys compiled by the U.S. Department of Agriculture Soil Conservation Service.

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#### H. Lava Flows

Since lava flows are located in the Desert region, information on this resources is available in a computer map database for the Desert region. The general locations of lava flows are also noted in the 1973 Conservation and Open Space Report and in the BLM's California Desert Conservation Area Plan.

#### I. Cinder Cones

Since cinder cones are located in the Desert region, information on their location is available in a computer map database for the Desert region. Cinder cone locations are also shown in the 1973 Conservation and Open Space Report and to some extent in the BLM's California Desert Conservation Area Plan.

#### J. Dry Lakes/Playas

Since dry lakes are primarily located in the Desert region, the primary source of information on this resource is a computer map database for the Desert region. Dry lakes are also shown on USGS quadrangle maps and on commercially available maps (such as Thomas Guides).

#### K. Fragile Soils

The locations of fragile soil areas supporting special plants and animals are discussed in the Biological Background Report of the General Plan. In addition, manual maps of areas with fragile soils have been produced by the USDA Soil Conservation Service, although these maps cover portions of the County only. In individual cases, soil studies may be necessary to determine whether fragile soils exist. The County's 1973 Conservation and Open Space Report also outlines general areas in which these soils are found.

#### L. High Erosion Hazard Soils

The location of areas with erosion-prone soils is shown on maps prepared by the USDA Soil Conservation Service. General areas with "unstable" soils are also shown in the 1973 Conservation and Open Space Report.

#### M. Perennial and Intermittent Streams

The locations of perennial and intermittent streams are shown in a computer map database for the Desert region, and throughout the County on quadrangle maps prepared by the U.S.

Geologic Survey.

**N. Groundwater Recharge Areas**

The locations of surface groundwater recharge areas are shown in maps maintained by the County Flood Control District, including the "Stormwater Facilities Map" and the "Surface Drainage Map."

**O. Lakes and Reservoirs**

In the Desert region, lakes and reservoirs have been mapped in a computer map database. In the Mountain region, where lakes are privately owned, the general outline of shorelines can be determined from the "Parcel Base Map" of the Overlay maps. Throughout the County, the locations of lakes and reservoirs can also be determined by reviewing USGS quadrangle sheets and commercially available maps, such as Thomas Guides.

**P. Wetlands**

Information on known wetlands is available from several sources.

Wetland features in the Desert region, which includes much of the streambed of the Mojave River, are shown on a computer map database for the Desert region.

Elsewhere in the County, known wetlands have been identified and manually mapped by the U.S. Fish and Wildlife Service as part of that agency's National Wetland Inventory Program. However, this mapping should be used with caution, since the information is available at an inexact scale and typically shows only large wetland areas. In addition, San Bernardino County wetlands, which in other areas would not be considered "wet," are often not shown on the USFWS maps, because they do not fit standard classifications.

Many wetlands may exist in the County which have not been specifically surveyed and mapped.

**Q. Limited Habitat Types: Chaparral, Conifer Forest, Woodland, Riparian Areas**

The location of vegetative and habitat types is available in the Biological Background Report of the General Plan, on the Biotic Resources Overlay, and on manual maps prepared by the U.S. Forest Service and the Bureau of Land Management.

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An additional source of information is the State of California Natural Diversity Database (CNDDB), which maintains records and manual maps of the locations of all known occurrences of threatened, rare, and endangered plant and animal species. These locations are shown on overlays which align with USGS quadrangle sheets, and can be used to determine the general known locations and ranges of special plants and animals. Special plants and animals can be expected to occur in many locations not yet surveyed or mapped.

#### R. Joshua Trees

Although the locations of all stands of Joshua trees are not mapped, the locations of significant stands are shown in a manual map, "Unusual Plant Assemblages," included in the Bureau of Land Management's California Desert Conservation Area Plan. In general, it can be assumed that Joshua trees may be present on most sites in the desert and the desert/mountain interface.

#### S. Champion Lodgepole Pine

Locations of areas containing Champion lodgepole pines are shown in the BLM's California Desert Conservation Area Plan and discussed in the Biological Background Report of the General Plan.

#### T. Large Mammals and Raptors: Beaver, Mountain Lion, Bear, Golden Eagle

Locations of habitat areas for these species are shown in the Biological Background Report. Locations of habitat areas for these species are also mapped in the San Bernardino National Forest Land & Resource Management Plan and the California Desert Conservation Area Plan. The County's Mountain Planning Team also maintains records on the locations of beavers.

#### U. Spotted Owl

Locations of spotted owls and habitat areas are shown in the U.S. Forest Service's San Bernardino National Forest Land and Resources Management Plan, and from other sources, including the State of California Natural Diversity Data Base. In general, these include areas in the San Bernardino National Forest, including some areas of privately owned land.

V. Bighorn Sheep

Locations of Bighorn sheep habitat areas are shown in the U.S. Forest Service and BLM plans, as well as in other sources, such as the State of California Natural Diversity Data Base. An additional source of general information on Bighorn sheep habitat areas is the 1973 Conservation and Open Space Report.

W. Stevens Kangaroo Rat

Locations of Stephens kangaroo rat (SKR) habitat are shown in the Biological Background Report prepared for the General Plan, as well as the 1973 Conservation and Open Space Report. Locations of known SKR occurrence are also available from the State Natural Diversity Data Base.

X. Southern Rubber Boa

The Biological Background Report and the County's 1973 Conservation and Open Space Report indicate the general location of habitat for the Southern Rubber Boa. Although this species is identified by the CNDDDB, maps produced by this agency do not indicate the location of known occurrences to prevent capture of individuals.

Y. Mojave Ground Squirrel

The general location of the range of the Mojave ground squirrel is mapped in the Biological Background Report and the 1973 Conservation and Open Space Report. General information on the location of known ground squirrel occurrences is also available from the CNDDDB. The BLM's California Desert Conservation Area Plan also maps the range of this species.

Z. Yuma Clapper Rail

The general location of the Yuma clapper rail is described in the Biological Background Report and the 1973 Conservation and Open Space Report; information on this species is also available from the CNDDDB.

AA. Sonora Lyre Snake

The general location of the Sonora lyre snake is described in the Biological Background Report and the 1973 Conservation and Open Space Report; information on this species is also available from the CNDDDB.

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BB. Desert Tortoise

The habitat range of the Desert tortoise has been mapped by both the Bureau of Land Management, (Interim Tortoise Habitat Category Maps) and the U.S. Fish and Wildlife Service, (Class Maps) which has the responsibility to protect this species. These maps differ to some extent, representing the purpose of differing agencies. There is, however, cooperation and a sharing of information between Federal as well as State agencies. Management for the tortoise has intensified this issue due to its Federal and State listing.

The 1973 Conservation and Open Space Report maps a very general range for this species, but should not be used, since that report's map conflicts in many areas with more current information.

CC. Least Bells Vireo

Habitat areas for the Least bells vireo are mapped in the Biological Background Report, and are available from the CNDDb. Areas in the mountains and desert which support this species are also mapped by the U.S. Forest Service and the BLM.

DD. Wild Burros

Wild horse and burro management areas within the County are mapped in the BLM's California Desert Conservation Area Plan.

EE. Special Fish

San Bernardino County is home to a variety of threatened and endangered fish species, including several which exist only in the County. These species include the humpback sucker, bonytail, colorado squawfish, mojave chub, relict brine shrimp, relict crayfish, Tecopa pupfish, and the unarmored 3-spine stickleback (discussed earlier in this section).

The locations of these species are mapped in the BLM's California Desert Conservation Area Plan and the U.S. Forest Service's Management Plan. Information on these species is also available from the State CNDDb.

FF. U.S. Forest Service Management Zones

U.S. Forest Service Management Zones are mapped in the San Bernardino National Forest Land & Resource Management Plan.

## GG. SCAG Areas of Regional Significance and Concern

As part of its 1975 regional plan of open space areas, the Southern California Association of Governments identified a number of areas within San Bernardino County as critical open space areas.

These areas, which are listed in this Background Report, are mapped in SCAG's 1975 plan, although the level of detail is in many cases not specific enough to provide useful planning information. Many of these areas have also been identified by the Bureau of Land Management and the U.S. Forest Service.

## HH. Mineral Resources

Information on the location of mineral resources in San Bernardino County is available in hard copy form on maps Mineral Resource Zone maps produced by the State of California Geologist, which overlay this information on USGS quad sheets. In the Desert region, this information is available in a computer map database. In addition, the Bureau of Land Managements' (BLM) California Desert Conservation Area Plan contains manual maps identifying areas of known and potential mineral resources, as well as potential leasable salable minerals.

The locations of major mine sites is also shown on quadrangle maps prepared by the U.S. Geologic Survey (USGS), although the age of the data on these maps may affect the accuracy of this information. The locations of economic mineral resources are identified on manual maps in the BLM's California Desert Conservation Area Plan.

Since mines in the County require a conditional use permit, an additional source of potential information is the County's files. Locations of maps may be obtained from the C.U.P. files.

## II. Water Conservation and Management Areas

There are four state regional water quality control boards which manage the quantity and quality of local groundwater resources. They are the Lahontan, Colorado, Santa Ana, and Los Angeles Regional Boards. San Bernardino County and the underlying groundwater aquifers provide for domestic water storage on both a local and regional basis. The replenishment of groundwater occurs both artificially and naturally. Imported water from northern California is recharged into local aquifers throughout the County.

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Various facilities for handling imported water include the California Aqueduct (which feeds Silverwood Lake and then extends into Riverside County to Lake Perris) and the Colorado River Aqueduct (which feeds Gene Wash Reservoir and Copper Basin Reservoir near Parker Dam). These waters are managed by five state water contractors: the Mojave Water Agency, Chino Basin Municipal Water District, the Crestline/Lake Arrowhead Water Agency and the Metropolitan Water District of Southern California. These agencies, along with local purveyors, have established manmade lakes for water conservation and recreational purposes. These include Lake Silverwood, Lake Arrowhead, and Big Bear Lake. Lake Gregory is managed solely for recreation purposes.

#### JJ. Agricultural Lands

The location of areas in the Valley currently being farmed (at a resolution of approximately 20 acres) is available on hard copy maps from the U.S. Department of Agriculture (USDA) Soils Conservation Service, updated annually. The County of San Bernardino Department of Agriculture maintains annual records of agricultural production.

The location of lands containing prime and other levels of agricultural soils are identified on maps produced by the State of California Department of Conservation.

The USDA has also prepared detailed soils surveys for portions on the County, including: Soil Survey of San Bernardino County, Southwestern Part and Soil Survey of San Bernardino County, Mojave River Area. These documents contain manual maps which identify specific locations of areas containing various soil types; these soil types are identified in the reports for their agricultural suitability.

#### KK. Grazing Areas

Grazing area locations are available from the Bureau of Land Management and the U.S. Forest Service. The BLM's California Desert Conservation Area Plan and the U.S. Forest Service's San Bernardino National Forest Land & Resource Management Plan and Environmental Impact Statement both identify grazing areas.

Lands containing existing vegetation suited to the grazing of livestock are also identified on manual maps entitled "San Bernardino County Important Farmland," compiled by the State of California Department of Conservation. These maps do not identify whether grazing is occurring on identified lands, simply

whether the land is generally suitable for this use.

Since grazed areas change from year to year, exact mapping may not be available.

#### LL. Agricultural Preserves

Agricultural Preserves and Williamson Act contracts are utilized for the protection and enhancement of agricultural lands. There are 22 preserves containing more than 36,000 acres within the unincorporated area of the County. The County is noted for its large dairy preserve in the south Chino area. Citrus farming, once widespread, is currently declining in the Valley portions of the County. There still remain large blocks of active viable citrus farms predominantly in the east Valley region. The Desert region also provides for a multiple of agricultural uses, principally along the Mojave River extending from Silverwood Lake to the Newberry Springs area. As noted in the Soils/Agriculture section of the General Plan, the establishment of new agricultural operations in the desert may face severe limitations in available water supply and quality.

#### MM. Commercial Fisheries

A commercial fishery, as defined by the State Department of Fish and Games, involves the taking of fish from the wild for profit. San Bernardino County (a relatively dry County) is not the home of any major commercial fishing operations. There are, however, several small fish farms in the County. These small businesses raise exotic fish such as koi and species of rainbow trout, large mouth bass and, most commonly, channel catfish. They are sold to consumers for food or to stock private farm ponds. Basically, they are considered a form of specialty agriculture or aquaculture. Locations of these "fish farms" may be available in the County's business license files.

#### NN. Major Recreation Resources in San Bernardino County

##### 1. Regional Parks

County Regional Parks, which are described in detail in the Regional Parks Strategic Master Plan, 2010: Our Parks Future, are shown by location on the Resources Overlay. Specific information regarding the boundaries of regional parks is available from the Regional Parks Department.

## 2. Community Parks

Locations of community parks are mapped by individual jurisdictions (in the case of parks provided by cities) or the Department of Special Districts (in the case of parks provided by the County through a County-governed special district). In addition, several independent special districts exist in the mountain communities and the high desert which maintain mapping of the local parks they provide.

## 3. Districts and Service Areas with Park and Recreation Powers

Throughout the County, local recreation facilities, which provide recreational open space, are provided by independent and board-governed special districts. These districts typically collect an annual assessment on land within their boundaries, which is then used for the acquisition and operation of park facilities and recreation programs. Districts currently providing park and/or recreation facilities are listed in the Open Space Element of the General Plan. Mapping of the boundaries of some special districts is provided on the Infrastructure Overlay map; County department of Special Districts can provide more detailed information on the boundaries of districts.

Mapping of the boundaries of special districts is available from the County Department of Special Districts.

## 4. Bike Routes

Maps of bike routes may be obtained from individual cities.

## 5. OHV Areas

Off-Highway Vehicle (OHV) areas in the desert under the jurisdiction of the BLM are shown in the California Desert Conservation Area Plan.

## 6. Points of Public Access to Lakeshores, Rivers, and Streams

Points of public access to waterways are difficult to map, given the ownership pattern which generally exists adjacent to the County's lakes, rivers, and streams. Specifically, many lakes in the County are man-made, and therefore open to public access only at controlled locations. No concise map exists which identifies all points of public access to these features. A summary inventory of major public access opportunities to bodies of water is provided in the Open Space Element.

## 7. Ski Areas

Ski areas within the County are generally located on land under the control of the U.S. Forest Service. Mapping of ski areas in the national forest is available in the San Bernardino National Forest Land and Resource Management Plan and on USGS quadrangle maps.

## 8. Hang Gliding Areas

Hang gliding areas have been provided by the U.S. Forest Service in the San Bernardino National Forest through its special use permit process. Mapping of hang gliding areas in the national forest is available in the San Bernardino National Forest Land and Resource Management Plan.

## 00. Scenic Highways

In recognition of the visual quality of the areas through which they pass, the following roads are designated scenic routes by the County and, in some instances, by the California Department of Transportation (Caltrans). Major roadways, which may include some roadways designated as scenic routes, are shown on the Overlay maps. State scenic routes are mapped by the California Department of Transportation (CalTrans). In addition, the length of the "Rim of the World Highway," which includes portions of Highways 138, 18, and 38, has been officially designated by the U.S. Forest Service as a Scenic Byway.

## PP. BLM Scenic Area

The Bureau of Land Management (BLM) has designated a vast area of 1.5 million acres in the east central portion of the County as the East Mojave National Scenic Area. This Scenic Area is shown on mapping included in the California Desert Conservation Area Plan, which is on file at the Office of Planning.

As part of its Back Country Byways program, the BLM has also begun a process to designate a number of roadways in remote desert areas as Back Country Byways, a designation which is intended to alert motorists to the scenic quality of these less-traveled routes. One of these routes, the Wild Horse Canyon Back Country Byway, was designated as the nation's first Byway. A complete listing of this and other Back Country Byways is available from the BLM.

QQ. Major Open Space Areas for Public Health and Safety

1. Principal Faults (Active and Potentially Active)

The locations of known principal faults Countywide are available in digitized form on the Hazards Overlay. Manual maps prepared by the State Geologist are also available.

2. Severe Soil Limitations for Septic Tanks

Soil types for some portions of the County have been mapped by the USDA and are shown in that agency's publications, Soil Survey of San Bernardino County, Southwestern Part and Soil Survey of San Bernardino County, Mojave River Area. Those publications identify soil types which impose limitations on the installation of septic tank/leach field systems, although this information must be interpreted; no specific map delineating only areas with septic limitations has been compiled.

The 1973 Conservation and Open Space Report can also be used as a source of general information regarding the location of areas with septic tank limitations, but should not be used as a definitive source. As a general practice, soil studies on specific sites are required by the County whenever a potential for septic tank limitations is believed to exist.

Information on areas with septic tank limitations is complete only in those portions of the County mapped by the USDA. This information is available in manual maps only; the Overlay maps do not contain soil types.

3. Slide Prone Areas

Slide-prone areas in some portions of the County are shown on the Hazards Overlay. This information is also mapped at a general level in the 1973 Conservation and Open Space Report.

This information has been mapped for some portions of the County with a high potential for slide hazard; a complete mapping covering the entire County has not been completed. As a general rule, the County requires geotechnical studies for individual projects in areas subject to potential slide hazards.

#### 4. Dams

The locations of dams throughout the County are mapped in the Hazard Overlay. Dam locations can also be found on USGS quad sheets. This mapping is completely digitized in the Overlay system, and is also available in manual form.

Areas below dams which are subject to catastrophic inundation are shown on the Hazards Overlay map.

#### 5. Channels

The location of channels is available in computer map database of the Desert region. Manual mapping of channels in all portions of the County is available on USGS quadrangle maps, although older maps may not accurately show existing features.

The 1973 Conservation and Open Space Report also shows the general location of channels, although substantial construction of flood control facilities has taken place since that time, making the 1973 maps unreliable in some areas. A more accurate source of channel information outside the Desert region is the County Flood Control District's Regional Flood Control Maps, which show the locations of all County-maintained channels.

#### 6. Levees

Mapping of levees is available in a computer map database for the Desert region. Levees in other regions of the County is available on USGS quadrangle sheets and manual maps maintained by the County Transportation/Flood Control. The 1973 Conservation and Open Space Report also shows levee locations, although flood control facility construction since that report's completion may make those maps unreliable in some areas. The County Flood Control District's maps of facilities can be used as a more accurate indication of levee locations.

#### 7. Areas Subject to Flooding

Areas subject to flooding are identified on the Hazards Overlay, based on mapping prepared by the Federal Emergency Management Agency (FEMA).

8. Prado Dam Inundation Area

Mapping of the area subject to inundation is maintained by the County of San Bernardino Transportation/Flood Control District.

9. Seven Oaks Dam "Borrow Sites"

The locations of the borrow areas for the Seven Oaks Dam area available from the U.S. Army Corps of Engineers and the County of San Bernardino Transportation/Flood Control District.

10. Aqueducts (State water project, Colorado River, etc.)

Aqueducts are shown on USGS quad sheets and on some commercially available maps (such as Thomas Brothers Guides). General maps of aqueduct facilities are also available from a variety of sources, although these maps cannot be used to accurately locate these facilities. Individual agencies in charge of aqueducts (such as the Metropolitan Water District) can also be contacted for maps of their facilities.

This information can be compiled from outside sources, but is not available in a single map.

11. Utility Easement Corridors, Railroads, and Major Pipeline Easement Corridors

The locations of energy and utility corridors are available from a variety of sources, including the County Assessor's Office, which maintains detailed records of all easements and fee-owned parcels under the control of utility companies. For the Desert region, the BLM's California Desert Conservation Area Plan contains a manual map of existing and proposed transmission lines, corridors, power plants, and communication sites. This information is also available for the Desert region in a computer map database. The locations of railway lines are shown on publicly available road maps. Some information on rail corridors within the Valley region is available in the Overlays where these features form jurisdictional boundaries; however, the Overlay maps do not indicate the width or status of the corridors.

## 12. Landfills

The locations of active landfills within the County is contained in the County's Solid Waste Management Plan (CoSWMP) and in the Infrastructure Overlay. The locations of inactive landfills (which may have been established in the past without proper permitting) are in many cases not known. Many of these landfills are found within the incorporated boundaries of cities.

Mapping of the locations (but not boundaries) of existing landfills is complete, and is contained in the CoSWMP in the Overlay maps. Mapping of closed landfills may not have been accomplished, and may need to be completed on a case-by-case basis as these landfills are discovered.

## 13. Airports/Military Facilities

Information on airports is contained in the "Transportation/ Circulation" section of the General Plan. Airport locations are mapped in the Hazards Overlay.

### III. CORRIDOR/POLICY AREA IDENTIFICATION

The following are descriptions of the locations and resources within each of the wildlife corridors and policy areas identified on the Open Space Map of the Resources Overlay. A detailed breakdown of acreage and estimated acquisition costs associated with areas in which land purchase may be a primary strategy is shown in Table D, in the Addendum to this Background Report.

The identification of many of the corridors and areas listed below was achieved in consultation with Mr. Steve Loe, wildlife biologist for the San Bernardino National Forest of the U.S. Forest Service. Other areas were identified based on knowledge of significant existing resources, adjacency to areas within the Bureau of Land Management's California Desert Conservation Area, and on the principle of providing "wildlife corridors" to connect significant natural areas with each other.

As additional knowledge regarding the status of existing features becomes available or is made available in usable form in the County's automated mapping system, the listing of wildlife corridors and policy areas may be revised or expanded.

#### 1. Day Canyon

Geographic Description This corridor extends northward from the boundary of the national forest along the alignment of Day Canyon.

Resources Identified The canyon and its associated creek contain riparian areas and many sensitive species, including wild brown trout (all fish-supporting streams in the County are rare and worthy of protection). Substantial private inholdings. (See also the Open Space Element and the Biological Background Report for further identification of potential biotic resources in this area.)

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Open Space Objectives This area should be maintained both for its habitat values and as a dispersion corridor for wildlife to and from the national forest and open space areas within the City of Rancho Cucamonga.

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See Table D, at the end of this Background Appendix, for a detailed listing of approximate acreage within the areas listed, and approximate land acquisition costs. Not all areas listed are proposed for direct acquisition.

## 2. East Etiwanda

Geographic Description This corridor includes the southern portion of Etiwanda Canyon, north of the national forest boundary, where private inholdings exist.

Resources Identified The canyon contains a stream and riparian habitat, and supports several sensitive species, including wild brown trout (all fish-supporting streams in the County are rare and worthy of protection). Substantial private ownership along the canyon alignment. (See also the Open Space Element and the Biological Background Report for further identification of potential biotic resources in this area.)

Open Space Objectives This area should be maintained both for its habitat values and as a dispersion corridor for wildlife to and from the national forest and open space areas within the City of Rancho Cucamonga.

## 3. Lytle Creek

Geographic Description This corridor follows the alignment of Lytle Creek from the boundary of the national forest northward to approximately Miller Narrows.

Resources Identified This area contains riparian habitat and supports several sensitive species, including wild rainbow trout (all fish-supporting streams in the County are rare and worthy of protection). Substantial private ownership. (See also the Open Space Element and the Biological Background Report for further identification of potential biotic resources in this area.)

Open Space Objectives This area should be maintained both for its habitat values and as a dispersion corridor for wildlife to and from the national forest and other open space areas outside.

## 4. Middle Fork Lytle Creek

Geographic Description This corridor follows the alignment of the Middle Fork of Lytle Creek from Miller Narrows northward.

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See Table D, at the end of this Background Appendix, for a detailed listing of approximate acreage within the areas listed, and approximate land acquisition costs. Not all areas listed are proposed for direct acquisition.

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Resources Identified This area contains riparian habitat and supports several sensitive species, including wild rainbow trout (all fish-supporting streams in the County are rare and worthy of protection). Some private ownership in the southern reaches. (See also the Open Space Element and the Biological Background Report for further identification of potential biotic resources in this area.)

Open Space Objectives This area should be maintained both for its habitat values and as part of a larger dispersion corridor system for wildlife to and from the national forest and other open space areas outside.

#### 5. North Fork Lytle Creek

Geographic Description This corridor extends northward from Miller Narrows to approximately Chalk Peak.

Resources Identified This area contains riparian habitat and supports several sensitive species, including wild rainbow trout (all fish-supporting streams in the County are rare and worthy of protection). Substantial private ownership in the southern reaches. (See also the Open Space Element and the Biological Background Report for further identification of potential biotic resources in this area.)

Open Space Objectives This area should be maintained both for its habitat values and as part of a larger dispersion corridor system for wildlife to and from the national forest and other open space areas outside.

#### 6. South Fork Lytle Creek

Geographic Description This corridor follows the alignment of the South Fork of Lytle Creek northward from Miller Narrows into the national forest.

Resources Identified This area contains riparian habitat and supports sensitive species, including wild rainbow trout (all fish-supporting streams in the County are rare and worthy of protection). Some private ownership at the base of the Creek Fork. (See also the Open Space Element and the Biological Background Report for further identification of potential biotic resources in this area.)

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See Table D, at the end of this Background Appendix, for a detailed listing of approximate acreage within the areas listed, and approximate land acquisition costs. Not all areas listed are proposed for direct acquisition.

Open Space Objectives This area should be maintained both for its habitat values and as a part of a large dispersion corridor system for wildlife to and from the national forest and other open space areas outside.

#### 7. Lone Pine Canyon

Geographic Description This corridor follows the alignment of Lone Pine Canyon northward from approximately Blue Gut to approximately Clyde Ranch.

Resources Identified Riparian in lower half. Forest Service and Fish & Game manage deer in entire canyon (deer live in and move through the canyon). Substantial private ownership along entire canyon. (See also the Open Space Element and the Biological Background Report for further identification of potential biotic resources in this area.)

Open Space Objectives This area should be maintained both for its habitat values and as a part of a large dispersion corridor system for wildlife to and from the national forest and other open space areas outside.

#### 8. Cajon Wash

Geographic Description This area includes a large area along the Cajon Wash northward from approximately Devore to Mormon Rocks and south to the Santa Ana River.

Resources Identified Cajon Creek supports a native fishery and contains significant riparian vegetation. Least bells vireo habitat exists in this area. Habitat for endangered plants found in the past still these species have not been found in recent surveys. The Santa Ana River in this area supports the Santa Ana River Speckled dace, a fish listed as "Of Special Concern" by the State of California (all fish-supporting streams in the County are rare and worthy of protection). Animals, including large mammals such as bear and deer, regularly disperse across the Wash from the San Bernardino to the Angeles National Forest. Substantial private ownership exists throughout this area. (See also the Open Space Element and the Biological Background Report for further identification of potential biotic resources in this area.)

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See Table D, at the end of this Background Appendix, for a detailed listing of approximate acreage within the areas listed, and approximate land acquisition costs. Not all areas listed are proposed for direct acquisition.

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Open Space Objectives Cajon Wash is an open space area of substantial importance, and should be maintained as a habitat area and a wildlife dispersion area.

#### 9. Cleghorn Canyon

Geographic Description This corridor extends westward from the Cajon Wash along the alignment of Cleghorn Canyon, ultimately connecting with Corridor 13.

Resources Identified This corridor is part of dispersion network across the I-15 Freeway, and according to the U.S. Forest Service the most important large mammal corridor between Angeles and San Bernardino forests. Private ownership exists at the mouth of the canyon. (See also the Open Space Element and the Biological Background Report for further identification of potential biotic resources in this area.)

Open Space Objectives This area should be maintained as a dispersion corridor to ensure species and genetic diversity within the national forest.

#### 10. Crowder Canyon

Geographic Description This corridor follows the alignment of Crowder Canyon northward from the junction with Cajon Creek to approximately Summit. (Portions of Sections 24, 25, and 36, R6W T3N, and Section 19, R5W, T3N.

Resources Identified This area contains riparian habitat and potential habitat for the endangered Least bells vireo. Substantial private ownership exists as inholdings in the national forest. (See also the Open Space Element and the Biological Background Report for further identification of potential biotic resources in this area.)

Open Space Objectives Open space should be maintained in this area to preserve its habitat values.

#### 11. Cajon Wash Tributary

Geographic Description This corridor, a tributary to Cajon Creek, extends through portions of Sections 22 and 27, R6W T3N.

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See Table D, at the end of this Background Appendix, for a detailed listing of approximate acreage within the areas listed, and approximate land acquisition costs. Not all areas listed are proposed for direct acquisition.

Resources Identified This area contains riparian and other important habitat, which are threatened by private inholdings. (See also the Open Space Element and the Biological Background Report for further identification of potential biotic resources in this area.)

Open Space Objectives This area should be maintained as open space to preserve its habitat values and provide a dispersion area for wildlife.

## 12. Little Horsethief Canyon

Geographic Description This corridor follows the alignment of Little Horsethief Canyon from approximately Section 32, R5W T3N, to the junction with the Mojave River, Section 31, R4W T3N.

Resources Identified This area contains important riparian habitat, and is linked to the Mojave River. Substantial private ownership within the national forest along the southern reaches. (See also the Open Space Element and the Biological Background Report for further identification of potential biotic resources in this area.)

Open Space Objectives This area should be maintained as open space to preserve its habitat qualities and to continue to provide a dispersion link for wildlife to the Mojave River.

## 13. Mojave River Headwaters

Geographic Description This corridor follows the alignment of the Mojave River headwaters from approximately Cleghorn Pass to Lake Silverwood. (Sections 1, 2, 3, 4, R5W T2N). This corridor connects with Corridor 9.

Resources Identified This area contains riparian habitat, and is an important habitat area for deer. Substantial private ownership. (See also the Open Space Element and the Biological Background Report for further identification of potential biotic resources in this area.)

Open Space Objectives This area should be maintained as open space to preserve habitat values. Connection to the Mojave River should be maintained.

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See Table D, at the end of this Background Appendix, for a detailed listing of approximate acreage within the areas listed, and approximate land acquisition costs. Not all areas listed are proposed for direct acquisition.

#### 14. Lake Silverwood

Geographic Description This area generally describes the environs of Lake Silverwood.

Resources Identified The area around Lake Silverwood is used as a seasonal perching area by the endangered Bald eagle. (See also the Open Space Element and the Biological Background Report for further identification of potential biotic resources in this area.)

Open Space Objectives Maintain perching sites and habitat for the Bald eagle, and habitat values for other species.

#### 15. Mojave River

Geographic Description This corridor follows the alignment of the Mojave River from Lake Silverwood northward to the Hesperia area. (See also No. 61.)

Resources Identified The Mojave River, which is the major perennial river in the desert region, is an area of extreme biologic importance, containing rare desert riparian habitat (including habitat capable of supporting the endangered Least bells vireo). The Mojave River in this area supports fish, and is therefore worthy of protection. (See also the Open Space Element and the Biological Background Report for further identification of potential biotic resources in this area.)

Open Space Objectives The entire length of the Mojave River should be maintained as open space to provide needed riparian habitat for desert species. Dispersion corridors should be provided along the river through urban areas.

#### 16. Grass Valley Creek

Geographic Description This corridor follows the alignment of Grass Valley Creek from the national forest to its junction with the Mojave River (Sections 23, 26, 36, R4W T3N). This corridor connects across the national forest with Corridor 20.

Resources Identified This area contains riparian habitat and potential habitat for the Least bells vireo, as well as the native Arroyo chub fish, which is listed as a "Sensitive Species" by the U.S. Forest Service (all fish-supporting streams in the

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See Table D, at the end of this Background Appendix, for a detailed listing of approximate acreage within the areas listed, and approximate land acquisition costs. Not all areas listed are proposed for direct acquisition.

County are rare and worthy of protection). The creek serves as a dispersion corridor to and from the national forest. Private ownership outside the national forest. (See also the Open Space Element and the Biological Background Report for further identification of potential biotic resources in this area.)

Open Space Objectives This area should be maintained as open space to preserve habitat values and wildlife dispersion.

#### 17. Deep Creek Tributary and Mojave River

Geographic Description This area is located in portions of Sections 18, 19, and 20, R3W T3N, along the alignment of the tributary to Deep Creek.

Resources Identified This area contains riparian habitat and habitat for the endangered Least bells vireo, as well as the native Arroyo chub fish, which is listed as a "Sensitive Species" by the U.S. Forest Service (all fish-supporting streams in the County are rare and worthy of protection). The creek serves as a dispersion corridor to and from the national forest. (See also the Open Space Element and the Biological Background Report for further identification of potential biotic resources in this area.)

Open Space Objectives This area should be maintained as open space to preserve habitat values and wildlife dispersion.

#### 18. Spotted Owl Habitat

Geographic Description This area includes areas of old-growth forest which provide habitat suitable for the Southern Spotted Owl, generally in and around Jobs Peak, Cedarpines Park, Valley of Enchantment, Crestline, and Lake Gregory.

Resources Identified This area contains good habitat for the Spotted Owl within canyons. Substantial private ownership and heavy urbanization. (See also the Open Space Element and the Biological Background Report for further identification of potential biotic resources in this area.)

Open Space Objectives Habitat for the Southern Spotted Owl and other species should be maintained.

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See Table D, at the end of this Background Appendix, for a detailed listing of approximate acreage within the areas listed, and approximate land acquisition costs. Not all areas listed are proposed for direct acquisition.

## 19. Waterman Canyon

Geographic Description This corridor follows the alignment of Waterman Canyon northward from the City of San Bernardino into the national forest.

Resources Identified Waterman Canyon contains riparian habitat, as well as good habitat values for deer. (See also the Open Space Element and the Biological Background Report for further identification of potential biotic resources in this area.)

Open Space Objectives Open space should be maintained in this area to preserve habitat values and wildlife dispersion.

## 20. Strawberry Creek

Geographic Description This corridor follows the alignment of Strawberry Creek from approximately the City of San Bernardino northward into the national forest (Includes Sections 12, 13, 14 R4W T1N, Section 7, R3W T1N) and ultimately connects across the national forest to Corridor 16.

Resources Identified This area contains important riparian habitat. Substantial private ownership along entire length. (See also the Open Space Element and the Biological Background Report for further identification of potential biotic resources in this area.)

Open Space Objectives Open space should be maintained in this area to preserve habitat values.

## 21. Lake Arrowhead

Geographic Description This area generally describes the environs of Lake Arrowhead.

Resources Identified The area around Lake Arrowhead is used as a seasonal perching area by the endangered Bald eagle. Substantial private ownership and extensive urbanization have occurred in the area around the lake. (See also the Open Space Element and the Biological Background Report for further identification of potential biotic resources in this area.)

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See Table D, at the end of this Background Appendix, for a detailed listing of approximate acreage within the areas listed, and approximate land acquisition costs. Not all areas listed are proposed for direct acquisition.

## 20.A. Strawberry Peak

Geographic Description This area is partially within Wildlife Corridor 20. near the connection to Corridor 16. The legal description is as follows:

N1/2 NW1/4 Section 29 T2N R3W  
NE1/4 Section 30 T2N R3W except State Highway  
SE1/4 NW1/4 Section 30 T2N R3W except State Highway  
N1/2 NW1/4 except portion in Tract 7909

Resources Identified The Strawberry Peak area provides habitat for the Southern Rubber Boa, a California state listed threatened species. The Spotted Owl, a federally listed endangered species, has also been observed in this area. Strawberry Peak, elevation 6,153', is located in the southwest portion of the area and Daley Canyon is located in the northeast portion. Many commonly occurring plants, such as stands of oak and pine trees, ferns, buckwheat, mustard, morning glory, and laurel exist in abundance in this area. There is a great opportunity for scenic mountain views both from the area itself and for the adjacent developed areas.

Open Space Objectives Maintain the area as open space for Southern Rubber Boa habitat, as well as providing habitat for other species, and for its scenic value.

Revised April 21, 1993



Open Space Objectives Maintain perching sites and habitat for the Bald eagle, and habitat values for other species.

## 22. Dispersion Corridor

Geographic Description This corridor is located generally between the urbanized areas of Lake Arrowhead and Running Springs. Substantial private ownership. Includes--among others--Sections 17, 18, 19, 20, 30, 29, R2W T2N, and Sections 13, 23, 24, 25, 26, 27, R3W T2N. (See also the Open Space Element and the Biological Background Report for further identification of potential biotic resources in this area.)

Resources Identified This area is important as the last major undeveloped portion of the mountain rim, and provides crucial habitat and dispersion for animals moving between the northern and southern exposures of the national forest.

Open Space Objectives Wildlife dispersion through this corridor should be maintained.

## 23. Deep Creek

Geographic Description This corridor follows the alignment of Deep Creek from the vicinity of Running Springs northward through the national forest.

Resources Identified Deep Creek is an important habitat area of rich species diversity, and is an state-designated "Wild Trout Stream." Some private ownership occurs in the vicinity of Running Springs. (See also the Open Space Element and the Biological Background Report for further identification of potential biotic resources in this area.)

Open Space Objectives This area should be maintained as a wildlife habitat and dispersion area.

## 24. City Creek

Geographic Description This corridor follows the alignment of City Creek from its headwaters to the junction with the Santa Ana River.

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See Table D, at the end of this Background Appendix, for a detailed listing of approximate acreage within the areas listed, and approximate land acquisition costs. Not all areas listed are proposed for direct acquisition.

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Resources Identified City Creek contains important riparian habitat and a link between the national forest and the Santa Ana River. The endangered Santa Ana River Woollystar sighted along creek, which also supports wild trout and native fish, including the Santa Ana Sucker, which is listed as "Sensitive Species" by the U.S. Forest Service (all fish-supporting streams in the County are rare and worthy of protection). Substantial private ownership and urbanization has occurred along the southern reaches of the creek. (See also the Open Space Element and the Biological Background Report for further identification of potential biotic resources in this area.)

Open Space Objectives City Creek should be maintained for its habitat values, and as an important link between the Santa Ana River and the national forest.

#### 25. Plunge Creek

Geographic Description This corridor follows a portion of Plunge Creek from the national forest to the Santa Ana River.

Resources Identified Plunge Creek contains riparian habitat, and provides an important link from the national forest to the Santa Ana River. Private ownership exists in the southern reach of the creek and outside the national forest. The creek also supports native fish, including the Arroyo chub, which is listed by the U.S. Forest Service as a "Sensitive Species" (all fish-supporting streams in the County are rare and worthy of protection). (See also the Open Space Element and the Biological Background Report for further identification of potential biotic resources in this area.)

Open Space Objectives Plunge Creek should be maintained as an open space area to preserve habitat and wildlife dispersion.

#### 26. Bear Creek

Geographic Description This corridor follows the alignment of Bear Creek from its junction with the Santa Ana River northward to the outlet of Big Bear Lake.

Resources Identified Bear Creek contains important riparian habitat, and is officially designated as a wild trout stream by the Department of Fish & Game. Bear Creek is also within the

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See Table D, at the end of this Background Appendix, for a detailed listing of approximate acreage within the areas listed, and approximate land acquisition costs. Not all areas listed are proposed for direct acquisition.

inundation area of the dam at Big Bear Lake. (See also the Open Space Element and the Biological Background Report for further identification of potential biotic resources in this area.)

Open Space Objectives Open Space should be maintained along Bear Creek to preserve habitat values.

## 27. Spoor Canyon Wildlife Corridor

Geographic Description This corridor describes a general area which links the proposed Crafton Hills Open Space with the national forest.

Resources Identified This area contains a portion of Mill Creek, but is most important as an area to provide a connection between the national forest and Crafton Hills.

Open Space Objectives A wildlife dispersion corridor should be maintained within this corridor to provide continued opportunity for migration into and out of Crafton Hills.

## 28. Mountain Home Village/Creek Confluence

Geographic Description This area is located in the vicinity of Mountain Home Village, along the alignment of Mountain Home Creek. (Portions of Sections 4, 8, 9, R1W T1S).

Resources Identified This area contains one of the best examples of riparian forest in the San Bernardino mountains. The Creek also supports wild rainbow trout, and is therefore worthy of protection as a native fishery.

Open Space Objectives Habitat values--especially the riparian forest--should be maintained in this area.

## 29. Little San Gorgonio

Geographic Description This corridor follows the alignment of Little San Gorgonio Creek from the Riverside County line to the national forest. (Portions of Sections 1, 2, 10, 11, R1W T2S and Section 36, R1W T1N).

Resources Identified This area contains important riparian habitat, and is part of a proposed open space system which

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See Table D, at the end of this Background Appendix, for a detailed listing of approximate acreage within the areas listed, and approximate land acquisition costs. Not all areas listed are proposed for direct acquisition.

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includes Pisgah Peak. Substantial private ownership occurs throughout this corridor. (See also the Open Space Element and the Biological Background Report for further identification of potential biotic resources in this area.)

Open Space Objectives Open space should be maintained in this corridor to preserve habitat values and provide for wildlife dispersion. Cooperation should be sought with Riverside County to continue habitat protection in the portion of Little San Geronio Creek outside San Bernardino County.

#### 30. Banning Canyon

Geographic Description This corridor follows the length of Banning Canyon from approximately Burnt Canyon to the national forest boundary. (Portions of Sections 2, 3, 4, 5, 7, 8, R1E T2S, and Sections 34, 35, 36, R1E T1S). This corridor ultimately connects with the South Fork of Whitewater River (Corridor 32).

Resources Identified This area contains population of bear, which use the canyon as a dispersion corridor. The canyon also contains riparian habitat. Substantial private ownership exists within the national forest.

Open Space Objectives Maintain habitat and dispersion values and consolidate national forest ownership.

#### 31. Mill Creek

Geographic Description This corridor follows the alignment of Mill Creek from Forest Falls to its confluence with the Santa Ana River.

Resources Identified Mill Creek is an important riparian area, and supports wild rainbow trout (all fish-supporting streams in the County are rare and worthy of protection). Substantial private ownership exists within and outside the national forest. (See also the Open Space Element and the Biological Background Report for further identification of potential biotic resources in this area.)

Open Space Objectives Habitat values in Mill Creek should be maintained. If possible, public ownership should be consolidated.

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See Table D, at the end of this Background Appendix, for a detailed listing of approximate acreage within the areas listed, and approximate land acquisition costs. Not all areas listed are proposed for direct acquisition.

### 32. South Fork Whitewater River

Geographic Description This corridor follows the alignment of the South Fork of the Whitewater River from approximately Raywood Flat to the national forest boundary (portions of Sections 31, 32, 33, 34, 35, 36, R2E T1S).

Resources Identified This area contains important riparian habitat, and supports native fish. This area also contains important habitat for Bighorn sheep. The Whitewater River supports a native fishery of rainbow trout which may be a relict population. The U.S. Forest Service is currently seeking to consolidate public/private ownership in this area.

Open Space Objectives Maintain habitat values; support efforts of Forest Service to consolidate public/private ownership.

### 33. North Fork Whitewater

Geographic Description This area follows the alignment of the North Fork of the Whitewater River within the national forest. (Portions of Sections 23, 24, 25, 26, R2E T1S).

Resources Identified This area contains critical Bighorn sheep habitat, as well as riparian areas. The Whitewater River supports a native fishery of rainbow trout which may be a relict population. Major private inholding on Section 25. (See also the Open Space Element and the Biological Background Report for further identification of potential biotic resources in this area.)

Open Space Objectives Maintain habitat values, especially for Bighorn sheep. Support efforts by Forest Service to consolidate public/private ownership.

### 34. Pacific Crest Trail

Geographic Description This area follows the alignment of the Pacific Crest Trail from the boundary of the national forest to the Riverside County line.

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See Table D, at the end of this Background Appendix, for a detailed listing of approximate acreage within the areas listed, and approximate land acquisition costs. Not all areas listed are proposed for direct acquisition.

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Resources Identified In addition to the trail, this area contains riparian and Bighorn sheep habitat.

Open Space Objectives Maintain habitat values and apply land use/design controls to limit visual impacts to areas visible from the Pacific Crest Trail.

35. Mission Springs

Geographic Description This area is located in the general vicinity of Mission Springs (generally around Section 35, R2E T1N).

Resources Identified This area contains Bighorn sheep and riparian habitat, and is traversed by the Pacific Crest Trail. The majority of Section 35 is in private ownership. (See also the Open Space Element and the Biological Background Report for further identification of potential biotic resources in this area.)

Open Space Objectives Maintain habitat values and apply land use/design controls to limit visual impacts to areas visible from the Pacific Crest Trail.

36. Pipes Canyon

Geographic Description This corridor is located along the alignment of Pipes Canyon in the national forest. (Portions of Sections 4, 5, 8, 9, 10, R3E T1N).

Resources Identified This corridor contains important wildlife and riparian habitat, in particular on the desert side of the mountains. All of Section 9 is in private ownership. (See also the Open Space Element and the Biological Background Report for further identification of potential biotic resources in this area.)

Open Space Objectives Maintain habitat values, seek public ownership of important habitat areas. Protect habitat outside national forest.

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See Table D, at the end of this Background Appendix, for a detailed listing of approximate acreage within the areas listed, and approximate land acquisition costs. Not all areas listed are proposed for direct acquisition.

### 37. Sleepy Creek

Geographic Description This corridor follows the alignment of Sleepy Creek within the national forest. (Portions of Sections 32, 33, 34, R3E T2N).

Resources Identified Sleepy Creek contains important riparian habitat on the desert side of the mountains. The southern half of Section 33 is in private ownership. (See also the Open Space Element and the Biological Background Report for further identification of potential biotic resources in this area.)

Open Space Objectives Maintain habitat values, seek public ownership of important habitat areas. Protect habitat outside national forest.

### 38. Arrastre Creek

Geographic Description This area follows the alignment of Arrastre Creek from within the national forest (at approximately Section 2, R2E T2N) to the desert area (at approximately Section 6, R2E T3N).

Resources Identified This corridor contains important riparian habitat in a desert setting, and provides good habitat for birds. This creek is the only site in California at which the Hepatic Tanager is known to occur.

Open Space Objectives Maintain habitat values, seek public ownership of important habitat areas. Protect habitat outside national forest.

### 39. Grapevine Creek

Geographic Description This area follows the alignment of Grapevine Creek from Cactus Flat to the confluence with Arrastre Creek (portions of Sections 15, 16, 19, 20, 21 R2E T2N).

Resources Identified Grapevine Creek contains good riparian habitat of special value due to its proximity to the desert. Private ownership exists along the creek outside the national forest.

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See Table D, at the end of this Background Appendix, for a detailed listing of approximate acreage within the areas listed, and approximate land acquisition costs. Not all areas listed are proposed for direct acquisition.

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Open Space Objectives Maintain habitat values, seek public ownership of important habitat areas. Protect habitat outside national forest.

40. Rattlesnake Canyon

Geographic Description This corridor follows the alignment of Rattlesnake Canyon from the boundary of the national forest northward (portions of Sections 19, 20, 21, 27, 28, 29, 34, 35 R3E T3N, and Sections 2, 3, 10 R3E T2N).

Resources Identified This corridor contains important desert riparian habitat. The majority of the corridor is in public ownership.

Open Space Objectives Maintain habitat values, seek public ownership of important habitat areas.

41. Shay Meadow

Geographic Description This area is located east of Big Bear City and north of the Woodlands area.

Resources Identified Shay Meadow is an example of rare wet meadow habitat in the mountains, and supports a variety of endangered plants and animals, including stickleback fish. Substantial private ownership exists in this area. (See also the Open Space Element, the Biological Background Report, and the Big Bear Community Plan for further identification of potential biotic resources in this area.)

Open Space Objectives Maintain habitat values, seek public ownership of important habitat areas. Prevent development of adjacent areas which would adversely affect watershed. Protect stickleback and other species. Apply policies of Open Space Element and Big Bear Community Plan.

42. Big Bear Lake Watershed

Geographic Description This area includes the entire watershed of Big Bear Lake.

Resources Identified This area contains a number of specialized habitat areas, which support a large number of

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See Table D, at the end of this Background Appendix, for a detailed listing of approximate acreage within the areas listed, and approximate land acquisition costs. Not all areas listed are proposed for direct acquisition.

endangered plants and animals (as well as commonly occurring mountain species). Substantial private ownership exists throughout this area, which is heavily urbanized adjacent to the lake. (See also the Open Space Element, the Biological Background Report, and the Big Bear Community Plan for further identification of potential biotic resources in this area.)

Open Space Objectives Maintain habitat values. Control development to prevent damage to important habitat areas. Apply policies of Open Space Element and Big Bear Community Plan.

#### 43. Holcomb Valley

Geographic Description This area is located in the Holcomb Valley, which is part of the Big Bear Lake watershed area (see Area 42).

Resources Identified Holcomb Valley contains several examples of mountain habitats peculiar to this area, including pebble plains. These habitats support a variety of endangered species. Private ownership occurs in several areas. (See also the Open Space Element, the Biological Background Report, and the Big Bear Community Plan for further identification of potential biotic resources in this area.)

Open Space Objectives Maintain habitat values. Control development to prevent damage to important habitat areas. Apply policies of Open Space Element and Big Bear Community Plan.

#### 44. Baldwin Lake

Geographic Description This area is located around Baldwin Lake, east of Big Bear Lake.

Resources Identified Baldwin Lake provides rare wet meadow habitat and supports a number of endangered species, including endangered stickleback fish. Private ownership occurs throughout this area. (See also the Open Space Element, the Biological Background Report, and the Big Bear Community Plan for further identification of potential biotic resources in this area.)

Open Space Objectives Maintain habitat values. Control development to prevent damage to important habitat areas. Apply policies of Open Space Element and Big Bear Community Plan.

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See Table D, at the end of this Background Appendix, for a detailed listing of approximate acreage within the areas listed, and approximate land acquisition costs. Not all areas listed are proposed for direct acquisition.

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#### 45. Limestone Deposits

Geographic Description This encompasses an area of limestone deposits on the northern exposure of the San Bernardino Mountains, roughly from White Mountain to Blackhawk Mountain.

Resources Identified This area provides habitat for Bighorn sheep. The limestone deposits support plants peculiar to this area, including species being considered for federal protection as endangered species. Substantial private ownership occurs throughout this area. Mining of limestone currently taking place in several locations. Substantial private ownership exists in this area. (See also the Open Space Element and the Biological Background Report for further identification of potential biotic resources in this area.)

Open Space Objectives Maintain habitat values. Control development and mining to prevent damage to important habitat areas.

#### 46. Dispersion Corridor

Geographic Description This area is located between the proposed Pisgah Peak area (see No. 47) and the boundary of the national forest. (Portions of Sections 25, 26, 27, 34, 35, 36, R1W T1S)

Resources Identified This area is important as an area to maintain wildlife dispersion between the Pisgah Peak area and the national forest. Substantial ownership exists in this area. (See also the Open Space Element and the Biological Background Report for further identification of potential biotic resources in this area.)

Open Space Objectives Maintain wildlife dispersion through this area.

#### 47. Pisgah Peak

Geographic Description This area is centered around Pisgah Peak and includes portions of Sections 33, 34, 35, R1W T1S, and Sections 2, 3, 4, R1W T2S.

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See Table D, at the end of this Background Appendix, for a detailed listing of approximate acreage within the areas listed, and approximate land acquisition costs. Not all areas listed are proposed for direct acquisition.

Resources Identified This area consists of a small, separate mountain range, and currently supports a diversity of wildlife species, including large mammals. Substantial private ownership exists, including lands within the boundaries of the national forest. (See also the Open Space Element and the Biological Background Report for further identification of potential biotic resources in this area.)

Open Space Objectives Maintain habitat values. Consolidate public/private ownership to reduce potential for destruction of habitat.

#### 48. Chino Hills Open Space

Geographic Description This area generally includes a portion of the Chino Hills, including lands set aside as open space within private developments and by the state.

Resources Identified This area contains many examples of important habitat, and is a significant open space resource. (See also the Open Space Element and the Biological Background Report for further identification of potential biotic resources in this area.)

Open Space Objectives Maintain important habitat areas and connections with other nearby open space areas. Seek to make open space lands under County jurisdiction open to the public.

#### 49. Dispersion Corridor

Geographic Description This describes a general area within which an open space corridor should be provided to link the Chino Hills area with other open space lands in the vicinity, including the Prado Dam inundation area.

Resources Identified This area is needed to allow continued dispersion of wildlife between these areas.

Open Space Objectives Maintain a wildlife dispersion corridor of sufficient size to allow continued wildlife dispersion.

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See Table D, at the end of this Background Appendix, for a detailed listing of approximate acreage within the areas listed, and approximate land acquisition costs. Not all areas listed are proposed for direct acquisition.

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50. California Institute for Men

Geographic Description This is the area within the California Institute for Men/California Youth Authority facilities in Chino.

Resources Identified This area is noted primarily as a reflection of the large amount of open land here which could become available for public use if the prison facility closes.

Open Space Objectives If the prison facility closes, support the retention of substantial open space in this area.

51. Chino Dairy Preserve

Geographic Description This is the area within the agricultural preserve established by the County Board of Supervisors, and includes the large Chino dairy operations.

Resources Identified This is an important farming area, and produces the majority of the agricultural goods produced in the County. As an agricultural area, the Dairy Preserve also has some potential for other open space uses (see the Open Space Element for a discussion of potential multiple uses of farmland).

Open Space Objectives The Board of Supervisors has extended agricultural protection in this area through 1997. See Soils/Agriculture Policy SA-2.q (referenced in the Open Space Element). No land acquisition is proposed in this area (other than by the Southern California Agricultural Land Foundation), except where no other means of protection is available.

52. Cajon Pass

Geographic Description This is the area generally within the Cajon Pass area, north of Devore to approximately Mormon Rocks.

Resources Identified The Cajon Pass area separates the Angeles and San Bernardino national forests, and is an area which animals must cross to travel between the forests. This area also contains important riparian habitat and natural areas. Substantial private ownership exists in this area. (See also the Open Space Element and the Biological Background Report for

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See Table D, at the end of this Background Appendix, for a detailed listing of approximate acreage within the areas listed, and approximate land acquisition costs. Not all areas listed are proposed for direct acquisition.

further identification of potential biotic resources in this area.)

Open Space Objectives Maintain wildlife dispersion and habitat values in this area. Consolidate public/private ownership to prevent damage to important dispersion areas and habitat.

### 53. Santa Ana River

Geographic Description This includes the entire length of the Santa Ana River within San Bernardino County.

Resources Identified The Santa Ana River, although urbanized along some portions of its length, is one of the most important natural open space resources in the Valley and Mountain regions, providing important habitat and riparian areas. In its upper reaches, the river supports wild trout. Since the river passes through urban areas, it has the potential to serve as an important open space resource for human and wildlife use. Among the endangered species living on habitat in the river is the Santa Ana River woollystar, which is found only in this river. (See also the Open Space Element and the Biological Background Report for further identification of potential biotic resources in this area.)

Open Space Objectives Maintain the Santa Ana River as a natural open space area along its entire length. Improve habitat values where possible. Regulate sand and gravel operations within the river to prevent damage to habitat. Construct regional trail along the river. Cooperate with Riverside County, U.S. Forest Service, and adjacent cities to protect open space resources.

### 54. San Timoteo Canyon

Geographic Description This is the portion of San Timoteo Canyon within San Bernardino County, from the County line to its confluence with the Santa Ana River.

Resources Identified San Timoteo Canyon is largely undeveloped, and is an important open space resource both for natural habitat and scenic values. (See also the Open Space Element and the Biological Background Report for further

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See Table D, at the end of this Background Appendix, for a detailed listing of approximate acreage within the areas listed, and approximate land acquisition costs. Not all areas listed are proposed for direct acquisition.

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identification of potential biotic resources in this area.)

Open Space Objectives Maintain open space and scenic values along the canyon. Construct regional trail within the canyon. Cooperate with Riverside County and adjacent cities to protect open space resources.

#### 55. Live Oak Canyon

Geographic Description This is the portion of Live Oak Canyon within San Bernardino County, from approximately the Crafton Hills to the County line.

Resources Identified The portion of Live Oak Canyon south of the I-10 freeway is largely undeveloped, and is an important open space resource both for natural habitat and scenic values. (See also the Open Space Element and the Biological Background Report for further identification of potential biotic resources in this area.)

Open Space Objectives Maintain open space and scenic values along the canyon. Construct regional trail within the canyon. Cooperate with Riverside County and adjacent cities to protect open space resources.

#### 56. Crafton Hills Groves

Geographic Description This area generally describes an area of existing citrus operations west of the proposed Crafton Hills Open Space area.

Resources Identified This area is of value primarily as an agricultural district, although it also has scenic value as an example of the once-widespread citrus operations in the Valley region.

Open Space Objectives Maintain agricultural uses in this area. No land acquisition is proposed in this area, except where no other means of protection is available.

#### 57. Crafton Hills Open Space

Geographic Description This is an area adjacent to Yucaipa Regional Park, generally described as the lands in the Crafton

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See Table D, at the end of this Background Appendix, for a detailed listing of approximate acreage within the areas listed, and approximate land acquisition costs. Not all areas listed are proposed for direct acquisition.

Hills above an elevation of 2,400 feet.

Resources Identified This area is an important open space resource in the urbanizing Redlands/Yucaipa area, and has significant values as a relatively undisturbed habitat area, a scenic resource, and a potential area for recreational open space use. Substantial private ownership occurs in this area. (See also the Open Space Element and the Biological Background Report for further identification of potential biotic resources in this area.)

Open Space Objectives Maintain the Crafton Hills Open Space area in open space uses through purchase, transfer of density/development rights, or other means. See Open Space Policy in the Valley Region section of the General Plan.

#### 58. Mojave River

Geographic Description This corridor follows the alignment of the Mojave River from Hesperia northward to past Barstow (See also No. 15.)

Resources Identified The Mojave River, which is the major perennial river in the desert region, is an area of extreme biologic importance, containing rare desert riparian habitat (including habitat capable of supporting the endangered Least bells vireo). (See also the Open Space Element and the Biological Background Report for further identification of potential biotic resources in this area.)

Open Space Objectives The entire length of the Mojave River should be maintained as open space to provide needed riparian habitat for desert species. Dispersion corridors should be provided along the river through urban areas.

#### 59. Kelso Dunes Buffer Area

Geographic Description This is an area adjacent to the Kelso Dunes, extending several miles outward from the boundaries of the federally designated scenic area.

Resources Identified This area is identified primarily for its scenic values, although significant habitat also exists. (See also the Open Space Element and the Biological Background

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See Table D, at the end of this Background Appendix, for a detailed listing of approximate acreage within the areas listed, and approximate land acquisition costs. Not all areas listed are proposed for direct acquisition.

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Report for further identification of potential biotic resources in this area.)

Open Space Objectives Enforce scenic resource controls to preserve the appearance of this area and reduce visual impacts to the Kelso Dunes area. Restrict land uses which would destroy scenic or habitat values unless overriding considerations exist.

#### 60. Buffer Area

Geographic Description This is an area adjacent to the Moabi Wildlife Preserve, extending several miles outward from the preserve boundaries.

Resources Identified This area is identified primarily for its scenic values, although significant habitat also exists. (See also the Open Space Element and the Biological Background Report for further identification of potential biotic resources in this area.)

Open Space Objectives Enforce land use controls to preserve the open space character of this area and reduce impacts to the wildlife reserve. Restrict land uses which would destroy scenic or habitat values.

#### 61. Buffer area around Death Valley National Monument

Geographic Description This is an area adjacent to the portion of the Death Valley National Monument within San Bernardino County.

Resources Identified This area is identified primarily for its scenic values, although significant habitat also exists. (See also the Open Space Element and the Biological Background Report for further identification of potential biotic resources in this area.)

Open Space Objectives Enforce scenic resource controls to preserve the appearance of this area and reduce visual impacts to the national monument. Restrict land uses which would destroy scenic or habitat values.

#### 62. Joshua Tree Monument Buffer

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See Table D, at the end of this Background Appendix, for a detailed listing of approximate acreage within the areas listed, and approximate land acquisition costs. Not all areas listed are proposed for direct acquisition.

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Geographic Description This is an area adjacent to the portion of the Joshua Tree National Monument within San Bernardino County.

Resources Identified This area is identified primarily for its scenic values, although significant habitat also exists. (See also the Open Space Element and the Biological Background Report for further identification of potential biotic resources in this area.)

Open Space Objectives Enforce scenic resource controls to preserve the appearance of this area and reduce visual impacts to the national monument. Restrict land uses which would destroy scenic or habitat values.

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See Table D, at the end of this Background Appendix, for a detailed listing of approximate acreage within the areas listed, and approximate land acquisition costs. Not all areas listed are proposed for direct acquisition.

OPEN SPACE ELEMENT  
BACKGROUND APPENDIX: COST ESTIMATES

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IV. COST ESTIMATES

To provide an estimate of costs for the proposed open space system, three separate items are noted: cost of land acquisition, cost of trail construction, and continuing operations and maintenance costs. These items are discussed separately below.

A. LAND ACQUISITION COSTS

Projected land acquisition costs for the regional open space system are shown in Table B, in the Addenda to this Background Appendix.

When dealing with a project such as the establishment of a regional open space system where exact areas to be acquired are not known, a determination of exact acquisition costs is difficult. The reader should note that the acquisition cost estimates provided in this report are rough, and subject to substantial refinement as determinations of specific parcels for purchase are made. Statements regarding the level of accuracy in the projected costs are provided in the preface to Table D.

B. TRAIL CONSTRUCTION COSTS

To determine trail construction costs, average per-mile costs for each type of trail were applied to the overall trail lengths shown in the Open Space Element. Average costs, based on the experience of open space agencies elsewhere in California and the United States, are as follows:

Paved Trail: Average cost of \$50,000 to \$80,000 per mile

Unpaved Trail (Equestrian Use, Hiking, Mountain Biking, Etc.): Average cost of \$6,000 to \$15,000 per mile.

These costs include the construction of directly related facilities which may be required for a given trail, including signage, parking lots, staging areas, bridges and stream crossings, landscaping, fencing, and comfort stations.

As with land acquisition costs, these cost estimates are by nature general, and will be subject to refinement as the preparation of detailed trail plans is completed.

OPEN SPACE ELEMENT  
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Based on these general costs, estimated development costs for the proposed regional trails system are as shown in Table C. All costs assume that upper end of price range will apply; actual costs will fluctuate.

**TABLE C**  
**ESTIMATED TRAIL DEVELOPMENT COSTS<sup>1</sup>**

<u>Trail Name</u>	<u>Length (Miles)<sup>1</sup></u>	<u>Cost/Mile</u>	<u>Total Cost</u>
Rialto Trail	13.3	\$80,000	\$1,064,000
Baseline Road Trail	21.1	\$80,000	\$1,688,000
Cajon Creek Trail	20.3	\$80,000	\$304,500
Chino Hills Connector	4.7	\$15,000	\$70,500
City Creek Trail	5.6	\$15,000	\$84,000
Crafton Hills Trail	8.9	\$15,000	\$133,500
Cucamonga Creek Trail	29.8	\$80,000	\$2,384,000
Day Creek Trail	10.0	\$80,000	\$800,000
Deer Creek Trail	6.4	\$80,000	\$512,000
Demens Creek Trail			existing
Devils Canyon Connector	7.8	\$15,000	\$117,000
Edison/Schaefer Connector	10.4	\$80,000	\$832,000
Etiwanda Creek Connector	1.5	\$15,000	
Frontline Trail	15.0	\$15,000	\$225,000
Frontline Connector	4.4	\$15,000	\$66,000

OPEN SPACE ELEMENT  
BACKGROUND APPENDIX: COST ESTIMATES

TABLE C (Cont'd)  
ESTIMATED TRAIL DEVELOPMENT COSTS<sup>1</sup>

Trail Name	Length (Miles) <sup>1</sup>	Cost/ Mile	Total Cost
Greenbelt Trail	21.9	\$15,000	\$328,500
Jurupa Hills Trail	7.5	\$15,000	\$112,500
Live Oak Canyon Trail	5.8	\$15,000	\$87,000
L.A.D.W.P. Road Connector	3.5		existing rd.
Lytle Creek Trail	12.9	\$15,000	\$193,500
Mid-City Connector	7.3	\$80,000	\$584,000
Mill Creek Trail	13.5	\$15,000	\$202,500
Reche Canyon Trail	3.8	\$15,000	\$304,000
San Antonio Creek Trail	15.9	\$80,000	\$1,272,000
San Timoteo Creek Trail	8.9	\$15,000	\$133,500
Santa Ana River Trail	50	(Costs for this trail are not shown See detailed master plan for cost information.)	
TOTAL:			\$11,498,000

- Costs do not include land acquisition, and do not reflect saving which might accrue if access roads, fire roads, or existing trail could be utilized as part of the regional system.

### C. OPERATIONS AND MAINTENANCE

Operation and maintenance costs for the open space/trails portion of the regional open space system were determined based on the experience of the Midpeninsula Open Space District and the Marin County Open Space District. Both of these agencies indicated an average annual operating cost (in 1989) of \$50 to \$60 per acre of open space land managed.

This \$50-60 figure includes:

- Maintenance of trails and other public facilities
- Operating costs
- Vehicle maintenance costs
- Salaries for paid staff.
- Capital outlays for minor projects (fence construction, minor repair items, etc.)

This figure does not include land acquisition costs, which are estimated in Table D. The average cost figure does reflect a substantial reliance on volunteer labor, primarily for trail and open space maintenance. (As noted in the Implementation section of this document, volunteerism will be essential to the success of the open space/trails system.)

Based on a preliminary estimated acquisition area of approximately 30,000 acres of land, and assuming that all lands will be managed by the County (some lands may not require intense management, or may be managed by other agencies, such as the U.S. Forest Service), total annual operating costs will be approximately \$1,800,000.

This figure does not include operating costs for the regional park system; if regional park and open space operations are combined in one agency, some cost savings may result from the joint use of staff and equipment for parks and open space uses. The total operating cost for a joint regional park/open space district has not been calculated. In addition, since San Bernardino County is geographically larger than the open space districts surveyed, some costs may be higher due to increased travel times and the need to transport staff and equipment over large distances.

## OPEN SPACE ELEMENT

### BACKGROUND APPENDIX: IMPLEMENTATION RECOMMENDATIONS

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#### V. IMPLEMENTATION RECOMMENDATIONS

The following information expands on the implementation recommendations made in the Open Space Element.

##### A. IMPLEMENTATION MATRIX

To assist in the implementation process, the Implementation Matrix shown at the end of this Appendix was developed. The Matrix provides several categories of information:

- An identification of various types of open space lands, including trails.
- A listing of major categories of implementation strategies.
- An assessment of the applicability of a given implementation strategy to each category of open space lands (and trails). In some cases, a strategy may be strongly suited to implementing a given category of open space lands; in others, the strategy may be applicable only in some situations. As shown in the Matrix, some strategies do not apply to all categories of open space lands.
- An identification of the priority of each implementation strategy. Strategies are categorized into Phase One, which includes strategies which should be pursued as soon as possible following adoption of the Expanded Open Space Element; Phase Two, which includes strategies which are already part of the County's operating structure and which should be continued; and Phase Three, which includes strategies which will generally take place after land has been acquired and facilities (such as trails or staging areas) are being built or operated.

It is expressly intended that strategies from Phases One, Two, and Three may and should occur simultaneously. Implementation of strategies need not occur in Phase order.

Immediate, Continuing, and Operating strategies are discussed below. Additional information on implementation

strategies can be found in the informational reports included at the end of this Background Appendix.

## B. PHASE ONE STRATEGIES

As discussed above, the following are strategies which should be implemented as soon as possible following adoption of the Open Space Element. In general, these strategies include items which will either take time to complete (and should therefore be started as soon as possible) and/or must be in place to allow other strategies to take place.

### 1. Seek Enaction of Special Open Space District Legislation

As part of the overall implementation of the proposed open space plan, it is recommended that the County immediately seek approval of state enabling legislation similar to that recently passed for the County of Riverside (Senate Bill 486). Briefly, this legislation (if approved in a form similar to SB 486) would provide the County with the ability to establish an open space district and a property assessment with a simple majority vote (50 percent of the voters plus one vote) rather than a two-thirds majority typically required to form a special district.

At the present time, introduction of this type of legislation for the County of San Bernardino is being pursued by the Regional Parks Department. Chances for its adoption cannot be accurately assessed at this time.

Some major features of the legislation approved by the legislature for Riverside County include the following:

- The legislation takes into account a number of features in Riverside County which are very similar to those found in San Bernardino County, including the proximity of urban centers and rapidly expanding populations to open space lands and recreational opportunities, and provides special means for the County to address resultant open space needs.
- The law provides that an Open Space District may be formed either independently by the Board of Supervisors

or upon receipt of a petition signed by 5,000 residents. After either passing a resolution independently or receiving a petition and holding a public hearing, the Board must schedule an election to form the Open Space District. A simple majority vote is required to form the District.

- Either as part of the formation of the District, or in a subsequent election, a simple majority vote is required to establish a property assessment, which can be stated either as a flat fee, or as a range within which the assessment will fall.
- The enabling legislation for Riverside County allowed the Open Space District to be empowered not only with the powers typically assigned to a District, but with all provisions of the Lighting and Landscaping Act of 1972 (discussed below).

The use of an SB 486-type District and assessment mechanism is one which is attractive, since it would make implementation more achievable while continuing to give voters the ability to approve or deny the District and assessment. Establishment of an Open Space/Trails District to provide funding to the proposed Regional Parks and Open Space Department would also provide a highly visible agency, giving the County's open space efforts a prestige which might not be result from the formation of, for instance, a County Service Area.

However, this strategy would require the adoption of a special state enabling act, which could be difficult--and which might not be achievable in the near future. In addition, this strategy would also require voter approval, even at a level lower than would be required for other non-CSA assessments. Therefore, this strategy may be considered as a first priority, holding other strategies in reserve or as supplements to an Open Space District.

## 2. Formation of a "Regional Parks and Open Space" District

This recommendation, which is similar to the Open Space District discussed above, would expand the purview of the District to cover both regional parks and open space/trails,

rather than open space/trails alone, as discussed above. This option has been examined by the Open Space Technical Committee of the County's Growth Management Task Force, which has recommended that it be pursued as the preferred option to implement a Countywide open space system.

To become realistically achievable, implementation of this option would still require the adoption of special enabling legislation similar to SB 486.

Since this Regional Parks and Open Space District would collect assessment revenues for both regional parks and open space, several changes in County government structure would be required, as discussed in Section V of this Conceptual Plan. In general, these would be related to the replacement of the existing Regional Parks Department with the Regional Parks and Open Space District.

### 3. Formation of a County Service Area

This strategy, although included as a Phase One recommendation, is intended for use only in the case the combined special legislation and parks/open space district discussed above are not successful. Formation of a County Service Area is viewed as a "fallback" strategy only, and should be pursued only if necessary.

Although used in San Bernardino County primarily to finance the construction of public infrastructure (such as water and sewer systems), facilities (such as fire stations), and some local park facilities, County Service Areas have the potential to provide funding for large, regional facilities such as the proposed open space/trails system.

Formation of a County Service Area, or of Improvement Zones within an existing CSA (such as CSA 70) has several advantages:

- The Board of Supervisors may form a CSA without voter approval, provided that not more than 50 percent of the registered landowners within the proposed CSA protest its formation. A protest after the formation of a CSA from ten percent of the landowners within the area can

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### BACKGROUND APPENDIX: IMPLEMENTATION RECOMMENDATIONS

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force an election on its formation (in which case a majority vote is required).

- Once formed, the CSA has broad benefit assessment authority, and can impose property assessments without voter approval for a variety of uses, including the following, which could apply to open space/trails programs (a complete listing is included in Fieldman, Rolapp & Associates' appendix to the Preliminary Policies and Structure report prepared for the Open Space Element, which is included in this Background Appendix):
  - Soil conservation and erosion control
  - Geologic hazard abatement, including abatement on private property
  - Local park, recreation, and parkway facilities and services.
  - Any other governmental services which the County is authorized to perform and which the County does not perform to the same extent on a County-wide basis both within and outside of cities.

CSA's are empowered by state enabling legislation to finance "extended services" (including park and recreation facilities) through property assessment revenue, and additional "miscellaneous extended services" through the collection of charges or fees. (Assessments may also be collected for fire protection, although this has no impact on the ability of a CSA to collect fees for open space purposes.)

CSA's are not specifically empowered to issue bonds or other forms of debt, although these can be issued under other provisions of state law. Bonds can be issued by a CSA, for instance, subject to the same two-thirds voter approval requirement imposed on bonds. The CSA may also use a Certificate of Participation, using revenues to repay funds used to build capital facilities.

The establishment of a CSA would be a useful tool for the County. A CSA offers not only a number of financing and service advantages, but would also provide an omnibus entity to act in an administrative capacity.

However, a CSA would raise several issues with relation to the overall open space/trails effort. First, establishing a CSA would place the implementation of the open space/trails plan in the Office of Special Districts, rather than in a separate agency focused on open space and trails issues. This would both limit the visibility of the open space effort, potentially reducing public support, and would separate the planning function from regional parks and land management (although implementation of recommended cooperation strategies would reduce the effects of placing control in the Administrative Office).

Second, although a regular funding source would be established, the requirement that any bonded debt be approved by voters would limit the ability of the CSA to finance the immediate purchase of any large tracts of open space land, unless another financing arrangement could be implemented.

#### 4. Work With Other Open Space Groups

This strategy, which should be begun immediately, involves a pro-active effort on the part of the County to seek out independent open space groups, such as the Save Our Forests Association, the Nature Conservancy, and other land conservancy groups, in order to coordinate planning, effort, and funding in support of open space preservation.

This strategy is shown as a Phase One strategy in part because of the support these groups can provide for both the enabling legislation and the voter approval for the open space/parks district.

#### 5. Publicity

Publicity is included in the list of Phase One strategies to highlight the importance of building public support for the open space/parks district and to begin as soon as possible the process of informing the public of open space opportunities provided by the County and other cooperating agencies.

A method of keeping the media not only informed but involved is important. Features on the financing

opportunities in the press, and other media should be considered.

The production of the "marketing map" of proposed open spaces and trails which is to be completed after the adoption of the Open Space Element is the first action associated with this strategy.

#### 6. Resource Banks

A Resource Bank would be used as part of an overall volunteerism strategy to maintain a listing of persons, corporations, and other sources of expertise, funding, materials, equipment, etc.. For instance, the Resource Bank could include a listing of all contractors who have expressed an interest in providing equipment and/or manpower to construct portions of the trails system, or of biologists who might donate time to identify habitat areas proposed for acquisition and preservation. This information could be extremely useful in activating a community and getting them involved in providing meaningful support for the County and its open space/trails needs.

#### 7. Form A Non-Profit Corporation

A nonprofit corporation has many interesting use opportunities for the open space/trails system, and should be evaluated both as a vehicle to receive charitable gifts and as a meaningful part of an important asset management program. In addition, efforts can be coordinated with private nonprofit organizations (such as the Nature Conservancy) to either increase the ability to the County to provide open space lands and trails, or as a repository for some lands which are intended for permanent open space but which the County does not wish to retain.

Formation of a non-profit corporation is included as a Phase One strategy because this will facilitate other types of strategies.

### C. PHASE TWO STRATEGIES

"Phase Two" includes a variety of ongoing implementation strategies, which are recommended to be applied to the implementation of the regional open space/trails system. These

strategies generally include practices which are part of the County's normal operations, or which should be begun and then continued throughout the lifetime of the open space system's acquisition, construction, and operation.

As with all strategies, some of the following may be best suited to individual projects, or to portions of the overall open space/trails system.

**1. Cooperation with Local, State, and Federal Agencies**

This strategy essentially involves cooperating with other governmental agencies in a variety of ways: coordinating planning, supporting policies and actions or other agencies which support the County's open space goals, and the like. This strategy is part of the County's current operations, but may be expanded to include open space issues or to place an increased emphasis in this area.

**2. Density Transfer**

This strategy, which is proposed in several policies in the Open Space Element, involves the use of density or "development right" transfers to preserve open space lands while allowing landowners to construct housing units or other developments allowed under existing zoning. This strategy is currently being used by the County in some situations.

**3. Special Districts (Lighting and Landscaping, Mello-Roos)**

This strategy involves the establishment of assessment districts to support the improvement and operation of some types of open space projects. As shown in the Implementation Matrix, this type of strategy is best applied to specific projects which provide a demonstrable "benefit" to a clearly defined area.

**4. Policy Implementation**

This strategy involves the implementation of policies in the Open Space Element and elsewhere in the General Plan.

## 5. Grants/Aid Programs

This strategy involves a directed search for grants and aid programs which could provide funding for portions of the open space and trails systems. A careful review of available grants should be completed, including not just public sources, but private foundations as well. Unusual combinations of sources should also be identified, such as historic preservation and the State Arts Commission and private foundations. Grants for construction of handicapped-accessible facilities, for instance, may be available, as might funds for the acquisition of permanent open space for habitat preservation.

## 6. Fee Structure

This strategy, which is best suited to recreational open space, is currently being used by Regional Parks. Essentially, this strategy involves charging fees for admission to some recreation amenities; the fees are used to offset or partially subsidize operating expenses. As shown in the Implementation Matrix, this strategy could be applied to portions of the trail system (as an example, the County of San Diego currently charges an annual permit fee for equestrian users).

## 7. Land Use Regulation

This strategy involves the designation of land uses (and the application of appropriate policies) which support the County's open space goals.

## 8. Cooperation With Cities

Although part of the interagency cooperative strategy listed earlier, this is highlighted as a separate strategy due to the high level of cooperation which will be necessary to establish the open space system in the Valley region.

## D. PHASE THREE STRATEGIES

As noted earlier, Phase Three strategies generally apply to the long-term operation of the open space/trails system, or require that some portions of the system be in place.

### 1. Public/Private Joint Venture

In some cases, opportunities may exist to establish a relationship with the private sector which can generate income for the Open Space/Trails District or contribute needed equipment or services. For instance, private construction companies may donate labor to construct trails, trailheads, or some attractions at recreationally oriented facilities.

A strategy should be pursued to establish special relationships with private corporations to secure additional support for specific programs, facilities or projects. This effort should play to the strength of the corporation and provide it with the type of exposure and experience that directly benefits them (examples might include recognition of the corporation or private venture partner through tastefully done advertising or other on-site or published information).

### 2. Individual Contributions

A strategy which should not be overlooked is the potential for soliciting individual contributions of land or money. Central to this strategy is the creation of a clearly identifiable "open space" agency which would receive these gifts, and the creation of a non-profit corporation to provide tax benefits to the donor.

### 3. Donated Labor and Materials

This strategy is similar to the acceptance of donated land and money, but involves the use of donated labor or materials for the construction or operation of facilities. This strategy, as shown in the Implementation Matrix, this strategy best applies to smaller projects which can be constructed with volunteer (often eager but unskilled) labor, such as trailheads, portions of the trail system in low-use areas, and the like. Construction of major facilities, such as large buildings in recreational areas, is generally not suited to the use of donated labor.

#### 4. Gift Books

"Gift Books" would be used to list needed items at a range of price levels, with the intent to encourage donations to the Regional Parks and Open Space Department or its nonprofit counterpoint. For instance, the Gift Book could list prices for a linear distance of hiking trail, for a picnic table in a staging area, or for large and small amounts of open space lands. The gift book idea gives people the opportunity to give things to an organization that the organization needs. Major private universities usually use this device to the greatest extent.

If used in the County's situation, it would be helpful to provide the Open Space/Trails District with a permanent staff member responsible for pursuing funding sources. The printing and distribution of the gift needs catalog could be secured through private contributions.

#### 5. "Adopt-A-Trail" or "Adopt-An-Open-Space"

This program gives a group, a person, or an organization the opportunity to take some ownership for a facility and see to it that it receives the care, the funding, and the equipment it needs to be a positive and important recreation and park resource in the community. Equestrian groups, for instance, could volunteer to provide some maintenance or patrol services on portions of the trails system; recognition of the group providing the support would be placed at the site to build a sense of pride and ownership among the volunteers.

As shown in the Implementation Matrix, this strategy is best applied to recreational areas and trails which are clearly identifiable and may be informally "adopted" whether or not a specific program is in place.

#### 6. General Fundraising

This strategy involves the use of general fundraising techniques to solicit donations to support the open space/trails system. A variety of techniques, which should be selected and coordinated by the County's open space coordinator, could be used.

## 7. Special Fundraising

This is similar to "general fundraising," but would involve solicitations for a specific open space project, such as the acquisition of a particular piece of land or the construction of a clearly identified portion of a trail system. In this case, donations would be sought for a specific purpose, rather than for general "open space" use.

## 8. Direct Purchase of Open Space Lands

This strategy involves the direct purchase of open space lands by the County in order to preserve open space values. As shown, this strategy is proposed for most categories of open space land, but is not considered to be suited for the preservation of lands retained to preserve the managed production of resources (with the exception of farmed agricultural land).

To reduce costs, this strategy should be relied upon only after less costly strategies, such as land use regulation, density transfers, etc., are tried.

## 9. Corporate Sponsors

This strategy is similar to public/private joint ventures, and involves the use of ongoing sponsorship for the construction and operation of portions of the open space system. As shown in the Matrix, this strategy applies best to trails and high-use recreational areas, where the corporate sponsor can be provided with maximum visibility. The use of on-site or published advertising or exposure for the corporate sponsor will be important to the success of this strategy.

## 10. Asset Management

All existing County property which is acquired for open space purposes should be evaluated to determine if there is a way to generate income from assets that is in addition to the normal recreation or open space use for the asset. Use of some lands for income-generating purposes could raise funds which could be used elsewhere in the open space/trails system. This would necessitate a broad

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definition of the Regional Parks and Open Space Department's mission or charter in its formation documents.

#### VI. BIBLIOGRAPHY/CONTACTS

The following is an expanded listing of information sources noted in the Open Space Element, as well as a bibliography of information which may be consulted by planners and the public for more detailed information on open space issues.

##### A. INFORMATION SOURCES

###### 1. General Information Sources

California State Endangered Species Act

County of Kern. Scenic Highways: An Element of the Kern County General Plan. 1974.

Department of the Interior, Bureau of Land Management. The California Desert Conservation Area Plan. 1980.

East Bay Regional Park District. 1988. Master Plan. Parkland Planning Department.

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Federal Land Policy and Management Act (FLPMA) 1976

Foothill Communities Protective "Greenbelt" Program. December 1983.

Marin County. Marin Countywide Plan. Part 2: Environmental Quality. 1982.

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State of California. Access to Parks. 1989. Draft Guidelines for Access to Programs and Facilities of the California Dept. of Parks and Recreation. Prepared by: Barrier Free Design Research Unit, San Luis Obispo.

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WESTEC Services. San Bernardino County Biological Resources Background Report. San Bernardino County Office of Planning, March 1989.

## 2. Wildlife/Natural Resources References

The following are excellent sources of general information regarding natural resources, corridor design, and habitat areas.

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Leedy, Daniel L., et al. Planning for Wildlife in Cities and Suburbs. Chicago, IL: American Society of Planning Officials, 1978.

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Spirn, Anne Whiston. The Granite Garden. New York: Basic Books, Inc., 1984.

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Tourbier, J. Toby, and Richard Westmacott. "Looking Good: The Use of Natural Methods to Control Urban Runoff." Urban Land, April 1989, pp 32-35.

### 3. Agricultural Preservation

The following sources may be consulted for information regarding agricultural issues and preservation.

American Farmland Trust. Eroding Choices, Emerging Issues: The Condition of California's Agricultural Land Resources (Executive Summary). San Francisco, CA.

American Farmland Trust. Planning and Zoning for Farmland Protection: A Community Based Approach. American Farmland Trust, January 1987.

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San Francisco Bay Ridge Trail. 1989. Draft Management Guide.

United States Department of Agriculture, Forest Service.  
Standard Specifications for Construction of Trails. June 1984.

**B. INFORMATION CONTACTS**

The following is a selected listing of primary persons and organizations who may be contacted for information regarding open space issues. Many additional sources may also be consulted, but are not listed here.

Bureau of Land Management  
Barstow Resource Area  
150 Coolwater Lane  
Barstow, CA 92311

Bureau of Land Management  
Needles Resource Area  
Box 888  
Needles, CA 92363

Bureau of Land Management  
California Desert District  
1695 Spruce Street  
Riverside, CA 92507

California Department of  
Fish and Game  
330 Golden Shore, Suite 50  
Long Beach, CA 90802  
(213) 590-5113

California Department of  
Conservation  
1416 Ninth Street  
Sacramento, CA 95814  
(916) 324-2555

California Department of  
Conservation  
Farmland Mapping Program  
1516 Ninth Street, Rm 400  
Sacramento, CA 95814  
(916) 324-0868  
Contact: Emily Kishi, Planner

California Department of  
Food and Agriculture  
1220 N Street, Room 104  
Sacramento, CA 95814  
(916) 322-5227

California Department of  
Forestry  
1416 N Street, Room 1516-2  
Sacramento, CA 95814

California Department of Parks  
and Recreation (Land and Water  
Conservation Fund)  
Planning and Local Assistance  
Division  
P.O. Box 2390  
Sacramento, CA 95811  
(916) 322-9576  
Contact: Ross Henry

California Department of

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Transportation  
(Trails Issues)

P . O .     B o x     9 4 2 8 7 4  
Sacramento, CA 94274  
(916) 322-9015  
Contact: Richard Blunden

State Coastal Conservancy

1330 Broadway, Suite 1100  
Oakland, CA 94612  
(415) 464-1015  
Contact: Peter Grenell,  
Executive Officer

Defenders of Wildlife

1244 Nineteenth Street NW  
Washington, DC 20036

U.S. Department of Agriculture

Soil Conservation Service  
(714) 792-3762

Marin County

Open Space District  
Marin County Civic Center  
San Rafael, CA 94903  
(415) 499-6387

Rails-To-Trails

Conservancy  
1400 16th Street NW  
Washington, DC 20036  
(202) 797-5400  
Contact: John Wengert

San Bernardino National  
Forest

P.O. Box 7  
26577 Hwy 18  
Rimforest, CA 92378  
(714) 337-2444

Solano County

Environmental Management  
601 Texas Street  
Fairfield, CA 94533  
(707) 429-6561  
Contact: Harry  
Englebright,  
Senior Planner

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BACKGROUND APPENDIX: TABLE D

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TABLE D: WILDLIFE CORRIDOR/POLICY AREA ACREAGES  
AND ACQUISITION ESTIMATES

The information in the table on the following pages indicates (except where noted) the land area within each of the wildlife corridors and policy areas shown on the Open Space Map of the Resources Overlay. To illustrate some opportunities and constraints related to implementation, this table also contains a breakdown of jurisdictional control within each area, and an estimate of the area in private ownership (and therefore potentially subject to purchase, acceptance for dedication, etc.).

When using this information, several factors should be recognized:

Acreage Figures Are General To compute the acreage figures in Table D, the total area within a corridor or policy area was measured. However, wildlife corridors will in most cases occupy only a portion of the area identified on the Open Space Map. To correct for this, it has been assumed in most cases that direct acquisition of only one-quarter to one-third of private lands in a corridor or area would be necessary. Actual acquisition could vary from this assumption.

Cost Estimates Reflect Purchase As A Primary Strategy Table D estimates the approximate costs which would result from direct purchase of private lands in identified areas. However, other, less costly strategies, such as regulatory control, may achieve preservation of identified areas at substantially reduced costs. Purchase of development rights only (with title remaining privately owned) could also reduce costs in some areas. The estimated acquisition costs shown in Table D should therefore be used as a "worst case" analysis; actual funding requirements may be much reduced.

Lands Outside Identified Areas Are Not Shown Table D provides a breakdown of identified areas. However, acquisition may be used as a preservation strategy for other lands not specifically identified on the Open Space Map. These individual acquisition projects cannot be foreseen, and would increase the total acquisition costs shown in Table D.

Land Costs Are Approximate Land costs shown in Table D are approximate, and are based on recent sales or asking prices in the general vicinity of identified wildlife corridors and policy areas. No determination has been made of exact parcels of land which may be acquired, making more detailed estimates impossible. Special factors affecting particular parcels which may be subject to acquisition cannot be determined at this time, and are not reflected in Table D.

TABLE B: ACQUISITION COST ESTIMATES

NO.	POLICY AREA/ WILDLIFE CORRIDOR	PRIMARY PURPOSE	GROSS ACREAGE	ACREAGE WITHIN COUNTY	INCOR- PORATED AREA	AREA UNDER FEDERAL CONTROL	AREA UNDER STATE CONTROL	PRIVATELY OWNED LAND	COST PER ACRE	COST PER 10-30 ACRES	COST PER 100+ ACRES	POTENTIAL ACRES TO BE ACQUIRED	TOTAL ACQUISITION (RANGE)	
													LOW	HIGH
1	Day Canyon	Riparian/wildlife protection	1,400	500		900		500	\$90,000	\$50,000	\$20,000	166.5	\$3,330,000	\$14,985,000
2	East Etiwanda Creek	Riparian/wildlife protection	400	150		250		150	\$90,000	\$50,000	\$20,000	49.95	\$999,000	\$4,495,500
3	Little Creek	Riparian/wildlife protection	1,581	517		1,064		517	\$50,000	\$30,000	\$20,000	172.161	\$3,443,220	\$9,608,050
4	Middle Fork Lytle Creek	Riparian/wildlife protection	850	44		802		256	\$50,000	\$30,000	\$20,000	85.240	\$1,704,960	\$4,262,400
5	North Fork Lytle Creek	Riparian/wildlife protection	1,666	146		1,520		146	\$50,000	\$30,000	\$20,000	40.610	\$972,560	\$2,430,900
6	South Fork Lytle Creek	Riparian/wildlife protection	596	69		527		69	\$50,000	\$30,000	\$20,000	22.977	\$659,540	\$1,140,050
7	Lone Pine Canyon	Riparian protection in southern portion. USFS and USFWS manage for deer habitat.	3,467	1,074		2,443		1,074	\$50,000	\$30,000	\$20,000	340.992	\$6,819,840	\$17,649,600
8	Cajon Wash	Native fishery and riparian vegetation in Cajon Creek. Habitat for least bell's vireo and endangered plants	3,140	754	2,394			3,140	\$40,000	\$25,000	\$4,000	707	\$3,140,000	\$31,400,000
9	Cleghorn Canyon	Dispersal corridor across I-15 Fwy. Most important large mammal corridor between national forests.	900	181		719		181	\$40,000	\$25,000	\$4,000	60.273	\$241,092	\$2,410,920
10	Crowder Canyon	Riparian habitat; potential habitat for least bell's vireo	630	185		445		185	\$40,000	\$25,000	\$4,000	61.605	\$246,020	\$2,464,200
11	Cajon Wash Tributary	Wildlife habitat on private inholdings.	304	80		304		80	\$40,000	\$25,000	\$4,000	24.64	\$104,560	\$1,045,600

TABLE D: ACQUISITION COST ESTIMATES

NO.	POLICY AREA/ WILDLIFE CORRIDOR	PRIMARY PURPOSE	GROSS ACREAGE	ACREAGE WITHIN COUNTY	INCOR- PORATED AREA	AREA UNDER FEDERAL CONTROL	AREA UNDER STATE CONTROL	PRIVATELY OWNED LAND	COST PER			POTENTIAL ACRES TO BE ACQUIRED	TOTAL ACQUISITION (RANGE)	
									1	10-30	100+		LOW	HIGH
									ACRE	ACRES	ACRES			
12	Little Horsethief Canyon	Riparian habitat.	2,206	1,307		953		1,253	\$50,000	\$30,000	\$10,000	417.249	\$4,172,490	\$20,862,450
13	Mojava River Headwaters	Riparian habitat; important area for deer.	340			170	170	0	\$50,000	\$30,000	\$10,000	0	\$0	\$0
14	Lake Silverwood	Eagle perching area. (No acquisition)	3,855			2,091	1,764	0	\$50,000	\$30,000	\$10,000	N/A	N/A	N/A
15	Mojava River	Riparian habitat; habitat for Least bell's vireo.	3,815	1,550		2,257		1,550	\$70,000	\$40,000	\$10,000	309.5	\$3,895,000	\$17,265,000
16	Grass Valley Creek	Riparian habitat; potential Least bell's vireo habitat. Native fish, important dispersion corridor.	2,737	536		2,201		536	\$30,000	\$20,000	\$5,000	170.400	\$892,400	\$5,354,640
17	Deep Creek Tributary and Mojava River	Riparian habitat; potential Least bell's vireo habitat. Native fish, important dispersion corridor.	1,252			1,252		0	\$40,000	\$25,000	\$5,000	0	\$0	\$0
18	Spotted Owl Habitat Area	Good habitat for this species in canyons.	6,680	2,797		3,891		2,797	\$100,000	\$20,000	\$20,000	699.25	\$13,905,000	\$69,925,000
19	Waterman Canyon	Riparian area. Good habitat for deer.	1,750	770	859	113		1,637	\$50,000	\$20,000	\$20,000	409.25	\$0,105,000	\$20,462,500
20	Strawberry Creek	Riparian habitat.	3,367	1,111		2,256		1,111	\$50,000	\$20,000	\$20,000	369.963	\$7,399,260	\$18,490,150
21	Lake Arrowhead	Eagle perching area. (No acquisition)	N/A					0	N/A	N/A	N/A	N/A	N/A	N/A
22	Dispersion Corridor	Only undeveloped portion of "Rim" area between desert and coastal side of mountains.	8,737	2,519		6,218		2,519	\$170,000	\$35,000	N/A	830.827	\$25,350,945	\$100,659,740

TABLE D: ACQUISITION COST ESTIMATES

NO.	POLICY AREA/ WILDLIFE CORRIDOR	PRIMARY PURPOSE	GROSS ACREAGE	ACREAGE WITHIN COUNTY	INCOR- PORATED AREA	AREA UNDER FEDERAL CONTROL	AREA UNDER STATE CONTROL	PRIVATELY OWNED LAND	COST PER ACRE	COST PER ACRE	COST PER ACRE	POTENTIAL ACRES TO BE ACQUIRED	TOTAL ACQUISITION (RANGE)	
													LOW	HIGH
23	Deep Creek	Good riparian habitat	5,567	1,037		4,530		1,037	\$120,000	\$35,000	\$5,000	343.656	\$12,027,960	\$41,230,720
24	City Creek	Riparian habitat and link to Santa Ana River. Native fish and trout. Santa Ana River woollystar sighted.	1,903	225	445	1,313		670	\$120,000	\$35,000	\$5,000	223.11	\$7,000,050	\$26,773,200
25	Plunge Creek	Riparian area and link to Santa Ana River. Native fish.	873	95	403	295		370	\$120,000	\$35,000	\$5,000	192.474	\$6,736,590	\$23,096,000
26	Bear Creek	Riparian habitat. Designated trout stream.	1,403	12		1,391		12	\$120,000	\$35,000	\$5,000	3.996	\$139,000	\$479,520
27	Crafton Hills Link	Area to connect Crafton Hills with national forest.	809	667	142			809	\$150,000	\$40,000	\$0,000	202.25	\$1,610,000	\$30,337,500
28	Mountain Home Village/Creek Confluence	One of the best riparian forests in the local mountains.	866					346	\$40,000	\$10,000	\$3,000	115.3512	\$1,153,512	\$4,614,040
29	Little San Geronimo	Riparian habitat	918	832		86		832	\$40,000	\$10,000	\$3,000	277.056	\$631,160	\$11,002,240
30	Hanging Canyon	Good riparian habi- tat. Used by bears as dispersion area.	2,900	2,450	450			2,900	\$40,000	\$10,000	\$3,000	965.7	\$2,897,100	\$30,620,000
31	Hill Creek	Riparian area with native fish.	3,032	1,435		1,197		2,635	\$40,000	\$10,000	\$3,000	877.455	\$2,632,365	\$35,090,200
32	South Fork White- water River	Riparian habitat with native fish. Bighorn sheep area.	1,928	964		964		964	\$40,000	\$10,000	\$3,000	321.012	\$963,036	\$12,890,400
33	North Fork White- water River.	Critical Bighorn sheep area. Riparian habitat with native fish.	3,250	700		1,550		1,700	\$40,000	\$10,000	\$3,000	566.1	\$1,690,300	\$22,644,000

[illegible][illegible]

TABLE B: ACQUISITION COST ESTIMATES

NO.	POLICY AREA/ CORRIDOR	PRIMARY PURPOSE	GROSS ACREAGE	ACREAGE WITHIN COUNTY	INCOR- PORATED AREA	AREA UNDER FEDERAL CONTROL	AREA UNDER STATE CONTROL	PRIVATELY OWNED LAND	COST PER ACRE	COST PER 10-30 ACRES	COST PER 100+ ACRES	POTENTIAL ACRES TO BE ACQUIRED	TOTAL ACQUISITION (RANGE)	
													LOW	HIGH
		is available.	2,986		1,493	2,300		670	\$150,000	\$40,000	\$3,000	169.5	\$500,500	\$25,425,000
45	Limestone Deposits	Limestone area pro- vides habitat for bighorn sheep and plants endemic to area.	20,917	0,316		20,474	127	0,316	\$150,000	\$20,000	\$2,000	2079	\$4,150,000	\$311,050,000
46	Dispersion Corridor	Connection between Piute Peak and National Forest.	1,103					1,103	\$150,000	\$10,000	\$0,000	387.299	\$7,930,392	\$35,090,030
47	Piute Peak	Wildlife habitat in area of scattered national forest holdings.	3,793	2,050		1,735		2,050	\$150,000	\$40,000	\$10,000	605.314	\$6,053,140	\$107,797,100
48	China Hills Open Space	Area within China Hills Specific Plan required to provide an open space. (No acquisition)	N/A					0	N/A	N/A	N/A	N/A	N/A	N/A
49	Dispersion Corridor	Connection between China Hills open space area, Piute Peak landmark area, open lands within Cali- fornia Institute for Man, and China Dairy Preserve.	7,300	639	6,749			7,300	\$175,000	\$80,000	N/A	2460.204	\$196,016,320	\$430,535,700
50	California Insti- tute for Man	Prison facility con- tains substantial open areas; poten- tial for retention as open land if prison closes. (No acquisition)	N/A					0	N/A	N/A	N/A	N/A	N/A	N/A
51	China Dairy/ Preserve	Important dairy area; currently in agri- cultural preserve. (No acquisition)	N/A					0	N/A	N/A	N/A	N/A	N/A	N/A

TABLE B: ACQUISITION COST ESTIMATES

NO.	POLICY AREA/ WILDLIFE CORRIDOR	PRIMARY PURPOSE	GROSS ACREAGE	ACREAGE WITHIN COUNTY	INCOR- PORATED AREA	AREA UNDER FEDERAL CONTROL	AREA UNDER STATE CONTROL	PRIVATELY OWNED LAND	COST PER			POTENTIAL ACRES TO BE ACQUIRED	TOTAL ACQUISITION (RANGE)	
									1 ACRE	10-30 ACRES	100+ ACRES		LOW	HIGH
52	Cajon Pass	Large natural dis- persion area. Ri- parian and natural areas.	15,716	7,864	7,170	602		15,034	\$50,000	\$30,000	\$20,000	3006.322	\$100,126,440	\$250,316,100
53	Santa Ana River	Important connection between national forest and Pacific Ocean.	20,731	6,950	5,532	8,241		12,490	\$50,000	\$30,000	\$20,000	4159.17	\$809,103,400	\$207,950,500
54	San Timoteo Canyon	Natural area with creek provides wild- life habitat and dispersion.	3,549	1,409	2,060			3,549	\$150,000	\$40,000	\$15,000	1101.017	\$17,727,255	\$177,272,550
55	Live Oak Canyon	Natural area with creek provides wild- life habitat and dispersion.	2,224	2,224				2,224	\$150,000	\$40,000	\$15,000	740.592	\$11,100,000	\$111,000,000
56	(Not Assigned)													
57	Crafton Hills Groves	Area proposed for retention of agri- cultural uses. (No acquisition)	3,930	3,232	706			3,930	N/A	N/A	N/A	N/A	N/A	N/A
58	Crafton Hills Open Space	Open lands in Crafton Hills	4,052	3,670	357	25		4,027	\$150,000	\$40,000	\$15,000	3020.25	\$45,303,750	\$453,037,500
59	Desert Urban Area Buffer	Area proposed for land use controls to control city sprawl in desert. (No acquisition)	N/A					0	N/A	N/A	N/A	N/A	N/A	N/A
60	Barstow Buffer	Area proposed for land use controls. (No acquisition)	N/A					0	N/A	N/A	N/A	N/A	N/A	N/A
61	Mojave River	Important riparian area in desert. See Nos. 13 and 15.	N/A					0	\$50,000	\$3,000	\$7,000	N/A	N/A	N/A

TABLE D: ACQUISITION COST ESTIMATES

NO.	POLICY AREA/ WILDLIFE CORRIDOR	PRIMARY PURPOSE	GROSS ACREAGE	ACREAGE WITHIN COUNTY	INCON- PORATED AREA	AREA UNDER FEDERAL CONTROL	AREA UNDER STATE CONTROL	PRIVATELY OWNED LAND	COST PER 1 ACRE	COST PER 10-30 ACRES	COST PER 100+ ACRES	POTENTIAL ACRES TO BE ACQUIRED	TOTAL ACQUISITION (RANGE)	
													LOW	HIGH
62	Helise Dunes Buffer Area	Area for land use controls to protect Helise Dunes. (No acquisition)	N/A					0	N/A	N/A	N/A	N/A	N/A	N/A
63	Buffer Area	Area for land use controls to protect wildlife reserve. (No acquisition)	N/A					0	N/A	N/A	N/A	N/A	N/A	N/A
64	Death Valley Buffer Area	Area for land use controls adjacent to Death Valley National Monument (No acquisition)	N/A					0	N/A	N/A	N/A	N/A	N/A	N/A
65	Joshua Tree Nat. Buffer Area	Area for land use controls adjacent to Joshua Tree National Monument (No acquisition)	N/A					0	N/A	N/A	N/A	N/A	N/A	N/A
TOTALS:			200,379	70,031	29,003	96,154	0,099	107,006				30177.09	\$599,076,061	\$2,704,301,760

NO.	POLICY AREA/	PRIMARY	GROSS	ACREAGE	INCON-	AREA UNDER	AREA UNDER PRIVATELY	COST PER	COST PER	COST PER	ACRES	LOW	HIGH
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5. OPEN SPACE

INTRODUCTION

This section of the San Bernardino County General Plan provides a detailed discussion of the issue of open space in all its forms, and includes information, standards, and policies which deal with this issue.

This Open Space Element of the General Plan is organized into several sections dealing with various open space topics and issues, including a detailed discussion of a master plan of regional trails for San Bernardino County. This Open Space Element deals with the following subjects:

**Introduction:** This section is a guide to the Open Space Element, and describes the organization of information and policy contained in this section of the General Plan.

**Section 1. General Open Space Goals and Policies:** This section of the Open Space Element provides a listing of major open space goals and policies of the County of San Bernardino, including goals and policies drawn from other portions of the General Plan and policies and actions related to the overall implementation of the County's proposed open space system.

This section of the Open Space Element also contains a discussion of the open space information shown on the Resources Overlay.

**Section 2. Coordinating Open Space Planning:** This section describes a variety of issues related to the coordination of land use planning within the County to ensure that all land use decisions take into account the County's desire to establish and maintain a quality open space system. This section also describes efforts which should be made within County government and between jurisdictions within the County to coordinate the planning and implementation of the regional open space plan.

**Section 3. Open Space Valuing System:** This section describes an Open Space Valuing System which can be used to rate the value or priority of open space areas. The Open Space Valuing System is intended to be used in the long-term implementation of the regional open space plan to guide the use of County funds and/or regulatory efforts into acquiring or otherwise protecting areas most suited for, or in need of, various types of open space. The Valuing System provides an objective measure of the relative value of land for open space uses.

**Section 4. Trails:** This section describes the County's Regional Trails Master Plan, and contains detailed policies and standards to be followed in the implementation of the trails system. These standards

guide both the design and operation of the trails system.

**Section 5. Preservation of Natural Resources:** This section deals with open space areas which are noted for the presence of natural features worthy of preservation. This includes areas which contain threatened or endangered species or their habitats.

**Section 6. Managed Production of Resources:** This section deals with open space which is characterized by its potential for economic use: areas which are suited for agriculture, mining operations, timber harvesting, and other extractive uses.

**Section 7. Recreation:** This section deals with open space as a resource to be used for recreational purposes, including regional parks and other areas which are suited for hiking, nature enjoyment, skiing, and similar uses.

**Section 8. Scenic Resources:** This section describes the County's scenic resources, and provides policies and standards which apply to the need to preserve important scenic vistas as part of an overall open space system.

**Section 9. Public Health and Safety:** This section deals with open space as part of an overall system of protection of the public health and safety. Issues in this section include open space as a part of a system to prevent damage and injury due to flooding, earthquakes, pipeline accidents, and other catastrophes. This section also describes open space in relation to the landfills and airports within the County.

Each section of this Open Space Element (with some exceptions) includes the following items:

1. A summary of the open space issues related to that topic.
2. Specific information on open space topics related to the particular issue. This includes a discussion of why open space is needed for the particular resource or issue, and a reference to detailed information, both in the General Plan and from other sources.
3. A reference to goals and policies from other portions of the General Plan which relate to the particular topic. These policies are listed by number for reference in other sections.

Goals and policies referenced in this element are intended to guide planners and persons using this Open Space Element to other areas of the General Plan which should be consulted for further information on open space issues.

4. A listing of specific open space goals and policies related to the particular open space issue. (In addition to the policies presented in this Open Space Element, the Regional Plan Section of the General Plan also contain policies specific to a region or community area; these regional sections should be consulted to determine if specific open space policies apply.)

SECTION 1. GENERAL OPEN SPACE NEEDS, GOALS AND POLICIES

A. Open Space In San Bernardino County

San Bernardino County contains an abundant amount of open space, including areas of outstanding scenic value; areas particularly suited for park and recreation purposes, and areas which serve as links between major recreation and open-space reservations. The County also includes vast areas of open land which are suited to uses which require open areas, including agriculture, grazing, mining, and the managed production of resources (such as timber harvesting). Much of this land is included in areas managed by the federal Bureau of Land Management (BLM), the U.S. Forest Service, and the National Park Service.

However, while the County contains vast open space areas, the majority of persons living in San Bernardino County live in the relatively urbanized Valley region, and must travel to distant locations to enjoy large open areas. Most of the County's large open space areas in the Desert region are inaccessible to the majority of San Bernardino County residents.

The chart below illustrates the multitude of State and Federal agencies responsible for managing a variety of open space resources within the County. Further information on areas within the County which are managed by various state, federal, and private agencies is provided in the Natural Resources section of this Open Space Element.

TABLE A  
JURISDICTIONAL CONTROL OF OPEN SPACE LANDS

	Approx. Acres	Approx. Square Miles
Entire County	12,904,960	20,164
National Forest	467,522	730
Bureau of Land Management (U.S.)	7,035,092	10,992
Bureau of Reclamation (U.S.)	36,212	57
Fish & Wildlife (U.S.)	7,612	12
National Park Service	1,867,538	2,918
Army Corps of Engineers	2,926	5
Federal Aviation Agency	1,075	2
State Lands	209,920	328
Bureau of Indian Affairs	<u>71,627</u>	<u>112</u>
Total*	9,867,047	15,418

\* Total of major open space lands under various forms of public control.

As a result of its wealth of open space areas, the County of San Bernardino also contains a variety of scenic resources, which are themselves considered part of the County's open space resources, and which must be considered in the planning process. Preservation of these open space areas and vistas is crucial to attaining the Countywide goal of providing a desired quality of life.

## B. Types of Open Space

This Open Space Element recognizes that open space comes in many forms. Although the typical definition of "open space" might include lands such as National Parks or other areas set aside to protect especially valuable scenic or natural areas, the issue of open space today encompasses a wide variety of land uses which are generally linked by the need for open, undeveloped land.

This definition of "open space" as any land set aside for uses which require a lack of development to function properly includes the following general types of open space (not in order of importance):

### 1. Open Space for Preservation of Natural Resources

This is the type of open space which is perhaps most typically envisioned as "open" areas which are noted for the presence of natural features worthy of preservation. In general, this type of open space is required to protect natural features of the land or environment, such as habitats for threatened or endangered plants or animals, important watersheds, rivers and streams, and other similar qualities.

### 2. Open Space for Managed Production of Resources

While many of man's uses of the land, such as housing, industrial facilities, and business centers, require the urbanization of the land, a number of economically productive uses also exist which rely on open land unencumbered by development or the responsibilities brought on by adjacent uses. This category of open space includes those uses which either require this open land, (including farming and mineral production) or which harvest products from lands which have not been urbanized (such as grazing or the harvesting of timber).

### 3. Open Space for Recreation

While modern society has created many types of recreation which can occur in an urban setting—or even within buildings—open areas in the outdoors remain an important location for many Americans seeking rest and relaxation. This type of open space can include areas such as the National Forests, where visitors seek recreation by hiking,

camping, picnicking, and skiing, and areas where use of off-highway vehicles (OHVs) is permitted.

#### 4. Open Space for Scenic Resources

San Bernardino is a County rich in scenic resources. The dramatic backdrop of the San Bernardino Mountains, the beauty of the mountain scenery itself, and the vast expanses of desert found within the County all contribute to the County's scenic beauty. In addition, many smaller, local areas throughout the County, due to special or unique features—including manmade features—can be considered "scenic." One common feature which these areas share is the need for open land to be enjoyed—natural backdrops, for instance, cannot be properly viewed or appreciated if screened by buildings or scarred by development. Scenic vistas from the highways which cross the County can similarly be diminished or destroyed by the indiscriminate placement of advertising signs, buildings, or manmade features.

#### 5. Open Space for Public Health and Safety

The final major category of open space which this Open Space Element addresses is land which must be set aside to protect the health and safety of the public. This category of open space includes both areas which are set aside to distance persons and buildings from hazardous situations (such as earthquake faults or areas subject to flooding) and open land which is itself part of a system built to protect health and safety (such as flood control channels or basins). Also included in this category of open space are land uses which are required as part of the overall functioning of modern society and which include or require undeveloped land as a resource or a buffer; this includes landfills and airports.

#### C. The Need to Plan for Open Space Uses

Failure to provide adequate open space can result in several undesirable effects. Without a plan of open spaces and trails in place, or in the absence of the conscientious application of policies related to open space, new development can quickly consume valuable open space lands. Inappropriate development can also result in the loss of open space uses through the alterations of natural features. Lastly, conflicting desires for use of open space lands can result in heated controversy. Off-highway vehicle use within the County has resulted in tremendous conflicts, particularly in terms of trespass upon private lands, and destruction of natural habitats; other conflicts can also occur, such as over-use of sensitive lands for hiking, mountain bicycling, or recreation.

In addition, the pattern of open space and developed lands in the County has created an imbalance in the need vs. the supply of open space

lands, since most County residents live in the urbanized Valley areas, while most open space is located some distance away in the mountains and deserts. As a result, areas that provide for recreational open space uses are being over utilized. This is also due, in part, to the fact that the effort to preserve new open space in the urbanized Valley and Desert regions has fallen short of identified regional needs. Additional open space areas are needed to provide: (1) a principle source of recreational opportunities; (2) relief from urbanization; and (3) a sense of community identity.

The land ownership patterns of San Bernardino County outside of the urbanizing areas are often referred to as a "checkerboard." This description reflects the mix of public and private land inholdings which currently exist within the County. Development of private lands can influence the direction of the public lands if not managed properly.

#### D. General Plan Goals Related to Open Space

The following goals, which are part of other sections of the County General Plan, are referenced here to illustrate the County's overall goals related to the preservation and enhancement of open space lands. These goals should be referred to as an illustration of the County's commitment to open space issues.

County Goals: 1, 5, 8, 10, 11

Land Use/Growth Management Goals: D-47, D-49, D-50

##### 1. General Plan Policies Related to Open Space

The following policies, which are located in other sections of the General Plan, are referenced here to illustrate applicable County policy toward open space issues.

Housing/Demographics: HE-11, HE-12

#### E. General Open Space Policies/Actions

This Element contains several subsequent sections dealing with the categories of open space lands identified above, and with other open space issues. Each of those sections contains policy direction related to the specific open space issue.

The policies and actions listed below are related to the Countywide goals listed above, as well as to Countywide Open Space Goals contained in this Element. The following policies apply to many types of open space, and are presented here in addition to other, issue-specific policies in this Element. For more specific policies dealing with a particular

category of open space, refer to the appropriate section of this Element.

OR-1 Because preservation of open space lands will be facilitated through the application of land use standards, the County shall implement the following actions:

- a. Utilize appropriate land use categories on the Land Use maps to provide for uses which respect open space values. Land Use districts appropriate for various types of open space preservation include: Agriculture (AG), Floodway (FW), Public (P), Resource Conservation (RC), Institutional (IN).
- b. Develop and apply development policies/standards to support retention of open space lands by: requiring large lot sizes, high percentage of open space or agricultural uses, and clustering.
- c. Utilize the Hazard and Resources Overlay Maps to identify areas suitable or required for retention as open space. Resources and issues identified on the Overlays which indicate open space as an appropriate use may include: flood, fire, geologic, aviation, noise, cultural, prime soils, biological, scenic resources, minerals, agricultural preserves, and utility corridors, water supply and water recharge.
- d. Apply the standards shown in Table B of this Open Space Element, "Potential Multiple Uses of Open Space Lands," when assessing potential multiple uses of open space lands.
- e. Ensure that any portion of the planning area that is under public and quasi-public domain but not necessary for public or quasi-public use be considered first for open space, and then for uses requiring development of the site.

OR-2 Because the County desires to protect open space lands, and since the County has a unique ability to implement open space programs countywide, the County shall acquire and develop public open space through the establishment of a long-term funding source for land purchase/lease and open space operations.

**F. Open Space Action Programs: Implementation and Funding**

Methods for implementing and funding the countywide open space system (in those instances in which open space lands are publicly maintained) will be vital to the achievement of the County's open space goals. The following Open Space Action Programs for Implementation, which seek to achieve the Countywide goals listed in this section and elsewhere in this Element, apply to all appropriate portions of the open space/trails system.

For further information on the Implementation Plan for the regional open space and trails system, the Open Space Background Appendix should be consulted.

OR-3 Because implementation of the open space policies and programs in this Element will require the application of specific policies and action programs and the availability of funding and other implementation mechanisms, the County shall:

- a. Seek approval of state enabling legislation to provide the County with the ability to establish a Regional Park and Open Space District (or an Open Space-Only District) and a property assessment with a simple majority vote.
- b. Seek to implement a variety of funding strategies, as identified in the separate Implementation Report prepared for the Open Space Plan.
- c. Utilize Special Assessment Districts, Joint Assessment Districts, and Mello-Roos Community Facilities Districts, where appropriate, to finance the acquisition and maintenance of public open space lands and trails.
- d. Prepare a report outlining the economic effects of open space, focusing on potential tourism revenues, the effect of open space on adjacent property values, and the relative costs of providing open space management or urban services for a site.
- e. If appropriate, seek a Park Bond Issue or Special Bond Issues to help fund acquisition, development, and ongoing maintenance of open space.
- f. Actively seek gifts and donations of open space lands and trail rights of way or easements.
- g. Actively seek state, federal, and private grants for the purpose of financing open space and trail acquisition, construction, and operation.
- h. Use general funds, user fees, proceeds from concession operations, and other sources which may be available to finance open space and trail acquisition, construction, and operation.
- i. Seek Joint Powers Agreements and coordination with other jurisdictions' Plans.
- j. Include open space and trail acquisition and development in its Capital Improvement Programs.

### G. Open Space Information on the Resources Overlay

An important portion of this Open Space Element is the Resources Overlay, which provides information on the general location of a variety of open space features which are proposed to be acquired or maintained either by the County or through the use of land use regulations.

#### 1. Use of Open Space Information on the Resources Overlay

The Resources Overlay is intended to be used as one source of information, in the land use planning process, and is intended to depict major features of the regional open space and trail system. Open Space information shown on the Resources Overlay is by necessity general, as discussed below; specific determinations of the boundaries of open space areas, alignments of trails, and locations of open space features will require more detailed planning.

The Resources Overlay is intended to be used as a single source of information for use in open space planning. However, since some information on open space issues is also maintained by other agencies, a major purpose of this Open Space Element is to direct the public and planners to other sources of information elsewhere in the General Plan or in other documents which must be referenced in the open space planning process.

#### 2. Open Space Information on the Resources Overlay

The Resources Overlay, which is part of the County's countywide GIS computerized mapping, contains the following open space information:

**Regional Trail Alignments** The Resources Overlay identifies the general alignments of primary and secondary regional trails. This information is conceptual, and does not show the exact alignments of trails. Trail alignments shown on the Resources Overlay are also described in the Trails section of this Open Space Element.

**Open Space Policy Areas** The Resources Overlay identifies areas in which specific open space resources or areas have been identified. The identification of Policy Areas on the Resources Overlay is not a complete representation of all areas in which policies will be applied. Policies intended to preserve open space for a variety of purposes apply in all unincorporated areas of the County.

**Wildlife Corridor Zones** These indicate the general locations of areas within which major wildlife corridors should be provided. The actual size and location of these corridors will need to be determined based on future detailed study. The Resources Overlay identifies only

MAJOR wildlife corridors. It is expected that application of policies in this Open Space Element will result in the establishment of major and minor wildlife corridors throughout the County.

**Greenbelt Areas** These indicate the general location of corridors along regional trail alignments in which expanded landscaping or natural plantings are proposed to provide scenic resources and opportunity for wildlife use.

**Buffer Areas** These indicate general areas in which reduced land use densities, land use controls, design considerations, or other planning programs should be used to reduce detrimental effects on areas within the buffer.

The Resources Overlay also identifies the general locations of regional parks, selected major lakes, and the boundaries of the National Forest.

As noted above and on the Resources Overlay, the information depicted is general in location, reflecting the sometimes undetermined locations of open space resources. And, as noted above, this information is complex and detailed, and is located on a variety of other maps and in other documents. This Open Space Element directs the reader to these other sources wherever necessary.

### 3. Open Space Areas Shown on the Resources Overlay

Policy areas, wildlife corridor areas, and trail alignments shown on the Resources Overlay are listed and described in further detail in the Open Space Background Appendix. The Background Appendix describes the specific purpose for each zone, area, and trail, and specific policies which apply. The Background Appendix should be consulted for further information on the Resources Overlay.

SECTION 2. COORDINATING OPEN SPACE PLANNING

An important issue which this Open Space Element addresses is the diversity of open space, and the need to coordinate the planning and implementation of an open space plan. This will both protect those types of open space which must be free from urbanization or encroachment and maximize the value of open space lands by providing for multiple uses where possible.

In addition to coordinating planning decisions, this Open Space Element also recognizes the need to coordinate decision-making by various agencies and jurisdictions within and outside of County government which has a direct or indirect effect on the implementation of a regional open space and trails system. Open spaces and trails in many areas cross a multitude of jurisdictional boundaries, but must be viewed—and planned for—in their entirety to function properly.

The following discussions describe the general types of open space which this Open Space Element addresses, how these areas can be most effectively used, and how County agencies and jurisdictions outside County government can coordinate to achieve the regional open space and trails system.

A. Multiple Use of Open Space Areas

As discussed in Section 1 of this Element, "open space" includes a diversity of land uses. However, open space lands should not be viewed as falling into discrete categories, in which only one use can occur. In many (but not all) cases, open space lands can serve a variety of functions.

Table B, on the following pages, discusses the relationships which generally occur between various "open space" uses of land. The table also provides an assessment of the compatibility of one open space use with another. This compatibility ranges from "slight or no," indicating that the uses in question should not be allowed to occur on the same or adjacent properties, to "some," indicating that measures may be available which would allow the uses to coexist, to "strong," which indicates that the uses are compatible (perhaps complementary) and can generally be allowed to occur simultaneously on the same land.

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TABLE B  
POTENTIAL MULTIPLE USES OF OPEN SPACE LANDS

Open Space Category	Potential Multiple Uses
Preservation of Natural Resources	<p>Strong<sup>1</sup> potential for multiple use as scenic areas, particularly if preservation of natural resources requires large areas of open land visible from urban areas, roadways, or trails. Strong potential for multiple use as watershed area. Strong potential for use as part of a coordinated flood control system which utilizes open areas or watercourses to detain or direct storm flows.</p> <p>Some<sup>2</sup> potential for use as timber or grazing land, if protected resources can withstand this type of harvest.</p> <p>Slight or No<sup>3</sup> potential for multiple use for surface mining or other uses which destroy or substantially alter natural features. Slight or No potential for farming which involves clearing of the land, the introduction of non-native plant or animal species, or the use of irrigation. Slight or No potential for residential use, except at very low densities and where clearing and fencing of individual properties is prohibited.</p>
Managed Production of Resources	<p>If used for low-intensity grazing or similar use, Some potential for multiple use to preserve natural resources (see discussion above).</p> <p>If surface mined, Some potential for multiple use as scenic open space, if resource extraction does visibly not damage natural features. If surface mined, No potential for immediate use for other open space uses (with the exception of public health and safety</p>

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TABLE B (Cont'd)  
POTENTIAL MULTIPLE USES OF OPEN SPACE LANDS

Open Space Category	Potential Multiple Uses
	<p>protection; <del>Some</del> potential for joint use in this situation if mining occurs within flood control basins or channels). If surface mined, <del>Some</del> potential for long-term (post-closure) use as natural or recreational open space, provided that mine closure is properly planned.</p> <p>If land is held in reserve (as for future mining or farming), <del>Some</del> potential for short-term use as natural resource preservation or recreation area until mining, farming, or other extractive use begins.</p> <p>If farmed with field crops or orchards, <del>No</del> potential for use of farmed land for natural resource protection. If intensively farmed, <del>Slight</del> or <del>No</del> potential for recreational use, although trails may pass through farmed areas. If intensively farmed, <del>Some</del> potential for scenic qualities, depending on type of farming.</p>
Open Space for Recreation	<hr/> <p>In general, <del>Strong</del> potential for multiple use as scenic open space, especially in urbanized areas.</p> <p><del>Strong</del> potential for multiple use as open space to protect public health and safety, such as trail systems adjacent to or within flood control facilities.</p> <p><del>Some</del> potential for multiple use to protect natural resources, provided human presence does not damage protected features (such as threatened or endangered species).</p>

---

TABLE B (Cont'd)  
POTENTIAL MULTIPLE USES OF OPEN SPACE LANDS

Open Space Category	Potential Multiple Uses
	<p>Slight or No potential for multiple use for resource extraction, unless: 1) extraction involves very low intensity use, such as grazing of forage, or 2) sufficient distance can be placed within a resource extraction site to protect public from hazards and provide a pleasurable recreation experience.</p>
Open Space for Scenic Resources	<p>Strong potential for multiple use as natural open space, if preservation of scenic features involves protecting natural vegetation and topography.</p> <p>Some potential for multiple use as open space for recreation, if scenic lands are open to the public.</p> <p>Some potential for multiple use as lands for resource extraction (see discussion above) if extraction is low-intensity and does not diminish scenic character or if resource use involves farming of a type which contains scenic worth.</p>
Open Space for Health and Safety	<p>Strong potential for multiple use as recreational open space, provided no immediate threat to safety exists which would preclude this use.</p> <p>Strong potential for use as scenic open space, especially if protection of health and safety involves use of open lands (such as for flood control facilities) or provides open areas in urban settings (such as pipeline rights of way or fault zones).</p>

TABLE B (Cont'd)  
POTENTIAL MULTIPLE USES OF OPEN SPACE LANDS

Open Space Category

Potential Multiple Uses

Some potential for multiple use to preserve natural resources, if health and safety uses maintain or replace natural habitat values.

Some potential for multiple use as resource extraction (mining), if this use occurs in conjunction with health and safety purpose.

Some potential for multiple use for farming, if this use can take place in areas subject to safety hazards.

1. Strong potential refers to situations in which multiple uses can almost always be achieved, and where uses are generally compatible.
2. Some potential refers to situations in which uses may in some cases be compatible, but where multiple uses are generally not suitable.
3. Slight or No potential refers to situations in which successful multiple use is generally very difficult or impossible to achieve, and most likely only occurs in special or unique circumstances.

As shown in Table B, many open space uses can coexist, provided adequate measures are taken to allow multiple use to occur. Flood control lands, for instance, if managed to promote multiple use, can provide health and safety protection, natural habitat (in unlined drainage channels, for instance), and scenic resources (provided no concrete or unsightly features are visible).

As a general rule, multiple use of open space lands is limited by the most intensive single use taking place; open space uses which require lower levels of disturbance generally cannot coexist with a use which substantially disturbs the land. Maintenance of a generally low level of disturbance increases the potential for multiple use.

B. Interjurisdictional Cooperation

An important factor which this Open Space Element recognizes is the need for cooperation among individual jurisdictions within the County to

successfully implement the regional open space and trail system. Cooperation between the County and individual cities is of course required for the implementation of many plans; it is of special importance for the regional open space plan because open lands, natural areas, and trail routes frequently cross jurisdictional borders.

The following sections provide information on goals and policies found elsewhere in the General Plan and action programs contained in this Open Space Element which support interjurisdictional cooperation.

C. General Plan Goals Related to Coordination of Open Space Planning

Many goals, which are part of other sections of the General Plan, deal with issues which affect open space of various types. The goals listed below, which are included in other parts of the General Plan, deal specifically with interjurisdictional cooperation.

Land Use/Growth Management Goals: D-59, D-60

1. General Plan Policies Related to Coordination of  
Open Space Planning

The following discussions, which are part of other sections of the General Plan, are listed here to illustrate County policy direction related to interjurisdictional cooperation.

Land Use/Growth Management

iii. Intergovernmental Coordination

Land Use/Growth Management

Land Use Planning in the Sphere of Influence (SOI) Areas

D. Interjurisdictional Cooperation Policies/Actions

The County shall seek to implement the following actions and programs to encourage interjurisdictional cooperation, in support of Countywide goals D-59 and D-60.

OR-4 Because the actions of the County should be coordinated to ensure that land use and other decisions with the potential to affect open space lands are carefully considered, the County shall form a Cooperating Committee consisting of high level representatives from the following:

- Local Agency Formation Commission
- Special Districts
- Regional Parks

- Transportation/Flood Control Department
- Planning

This Cooperating Committee shall, at a minimum, perform the following functions:

- Provide a forum for the regular transmission of proposed policies, land use and other policies, and infrastructure/open space/trails acquisition and development plans.
- Provide increased understanding among County agencies of their functions and current operations.
- Ensure that facilities (infrastructure, open space, regional parks, and other public facilities) and land uses are planned and coordinated among County agencies to avoid duplication of efforts, adverse effects on the plans of other agencies, and consistency with the County General Plan.

This Cooperating Committee should meet on a regular basis.

OR-5 Because the County's goals related to open space can be achieved only in cooperation with other agencies, the County shall work with other public agencies within the County to establish a Regional Interagency Open Space Committee consisting of representatives from all incorporated cities and state and federal agencies. This committee's function should be similar to the Coordinating Committee, focusing on providing a regular forum for the sharing of plans and information regarding open space and trails issues. This Regional Interagency Open Space Committee should meet on a regular basis.

OR-6 Because all planning functions which have the potential to affect open space lands should be coordinated, the County shall:

- a. Implement and monitor the acquisition and disposal of all County-owned or controlled real property to evaluate the value of surplus lands for open space uses and ensure that all actions are consistent with the countywide open space plan.
- b. Adopt policies which clearly state that the County General Plan is the guiding policy and planning document for all agencies within County government. Land use related plans and programs adopted and implemented by individual County agencies shall be required to be consistent with the General Plan.

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SECTION 3. OPEN SPACE VALUING SYSTEM

A. Introduction

The system of valuing or rating land for its suitability as open space takes into account many factors and policy directions established by the County in its General Plan and this Open Space Element. Various key open space criteria will be examined related to any property being considered as open space by San Bernardino County.

Open Space as defined in the Open Space/Trails Element of the General Plan falls into one or more of the following categories: Open Space for the Preservation/Protection of Natural Resources, Open Space for the Managed Production of Resources, Preservation of Agricultural Lands, Open Space for Recreation/ Trails, Scenic Open Space, and Open Space for Public Health and Safety. A Valuing System has been developed to rate a given piece of property within one of these particular categories and helps relate the relative value of categories in relationship to each other, as discussed below.

In some cases, a particular piece of property or type of open space may require preservation for one purpose only. However, sites which offer the potential for multiple types of open space uses are typically of greater value than those which achieve only one end use. Table C, in the previous section of this Open Space Element, describes general potentials for multiple use of open space lands.

B. Evaluation Process

The process of ranking land for open space has been kept as simple as possible to allow for use by the public and decision-makers as well as County planning staff. A given piece of property will, after being evaluated with this system, be identified as being of High Value, Moderate Value or Low Value for a particular type of open space purpose. Within each of these three levels a point value, or score, will be earned to allow for comparison and prioritization of open space lands within a certain level.

The first step in the process is the decision to evaluate the open space potential of a given site, area, or corridor. A particular piece of land may be evaluated because it is being considered for acquisition by the County, is part of the environmental evaluation process, is in an area where a general plan amendment or zone change is proposed, or for other reasons. In most cases, it is assumed that lands which are valued will be subject to potential discretionary action by the County. This may include a decision to approve or deny a private or public project, to place restrictions on the use of the land, or to purchase the site for use as permanent open space.

Once a decision has been made to evaluate a particular site or area, a number of "Determining Questions," listed below, are asked in relation to the parcel of land in question. The answers to these questions will identify the Valuing Chart(s) to be used to rate the property. (Copies of the Valuing Charts follow this section.) If a particular site or area under consideration cannot be easily categorized by answering the Determining Questions, then it should be evaluated under the most likely category(s) to determine its highest and best open space use(s). Once the primary open space type(s) has been determined, then the questions related to that category are answered on the appropriate Valuing Chart. Valuing charts should be completed for all possible open space categories applicable to a given piece of land.

Each "yes" answer on a Valuing Chart typically receives one (1) point. Each "no" answer receives zero (0) points. When there are no more questions following the path on a Valuing Chart, the number of points earned should be totaled and the property identified as being of a High, Moderate or Low value.

#### Determining Questions

1. Have Hazardous Materials been disposed of within this site now or in the past? (See the hazardous materials site survey.) If such materials exist, the County should not acquire control of the property unless the contamination is shown to be minimal and easily removable/correctable.
2. Does the property contain significant natural resources, including biological resources (special plants and animals, natural habitat); geologic features; naturally occurring water, streams, etc.; or is it located in an area where little or no human contacts/modifications have occurred? If so, use the Natural Resources Valuing Chart.
3. Is the land currently in agricultural production, surrounded by agricultural uses, or designated as Prime Agricultural Soils by the State? If so, use the Agricultural Preservation Valuing Chart.
4. Is the primary proposed use of the site recreational in nature; from active recreational uses to scenic viewing? If so, use the Recreation Valuing Chart.
5. If the primary reason for the land's potential open space value is to ensure the public health and safety, refer to one or all of the Valuing Charts which apply to an appropriate open space use.
6. Is the primary proposed use of the land for trails? If so, use the Trails Valuing Chart.

### C. Information Sources

To assist with the process of answering the questions above, this Open Space Element, the accompanying Open Space Background Appendix, and other sections of the General Plan, contain both information on various natural and manmade resources in the County, and sources outside the General Plan where this information can be obtained.

### D. Valuing Charts

The charts shown in Figures 1, 2, 3, and 4 are to be used to evaluate a piece of property which is being considered for open space, discretionary action, or acquisition by the County. The charts include: Natural Resources Valuing Chart, Agricultural Preservation Valuing Chart, Recreational Open Space Valuing Chart, and the Trails Valuing Chart.

No valuing chart is included for lands with the primary use of managed resource production such as mining, forestry, or grazing. This category is not included because it is not the intent of the County to acquire these types of uses while production is ongoing. Should such properties be considered for acquisition following their productive life, then they should be reviewed on a case-by-case basis and ranked using the most appropriate valuing chart.

All types of open space will be preserved or protected by the goals and policies of this Element, but not all areas may be subject to direct purchase by the County.

### E. Interpreting the Values

To assist in the use of the "values" which will be assigned in the valuing process, the following descriptions of value levels are provided. These descriptions outline the general categories of "high," "moderate," and "low," and provide guidance on the use of point values within each level.

#### High Value

"High" value describes those lands which contain resources, are in appropriate locations, or are in other ways very appropriate for open space uses. A "high" value rating for any site or property indicates that the County could be involved in the preservation/development of the site and may take the following actions:

- 1) Identify the area for the appropriate open space use if such a designation does not already exist.
- 2) Seek to implement the types of uses appropriate for the type of open space through discretionary and/or acquisition strategies.

### Moderate Value

Property determined to be of "Moderate" value will generally have value for open space, although the status of on-site resources, location of the site in relation to other open space areas or urban lands, or other features may indicate a lower value or priority for open space preservation compared to "high" value lands. When lands are designated as "moderate" in open space value, the following actions are appropriate:

- 1) The land should be considered for appropriate open space uses and, if possible,
- 2) Regulated cooperatively with other organizations.

### Low Value

A rating of "low" value for a particular open space use indicates that the land should be evaluated on another Valuing Chart to determine if it has value for another open space use. If the property consistently receives a low rating on all valuing charts, it is not as suitable for open space uses as lands valued "high" and "moderate." Application of policies and actions within this Open Space Element should be pursued, but acquisition and/or the use of special strategies is most likely not appropriate, and should be reserved for lands with higher open space values.

Within the "High," "Moderate," or "Low" category, a piece of land will also receive a point total. This point value is used to rank potential areas within each category; point levels do not provide a basis of comparison between categories. For instance, within the "High" category, a piece of land with a high point total should be considered to be of greater value than another site which is also ranked in the "High" category but which received a lower point score. A piece of land that ranks in the "High" category is of greater value for open space than a site in the "Moderate" category despite the point scores; the category ranking of "High", "Moderate", or "Low" is the primary indicator of a property's value as open space.

Each Valuing Chart also includes a section called, "Priority for Preservation." This section of the chart is used to give an indication of the urgency with which the County needs to pursue some action related to the property to ensure its status as open space now and in the future. The questions in this section of each chart are to be answered separately from all questions in the "Open Space Value" section. A point total will be derived for the property ranging from 0 to 4. A score of 0 in this section of the chart means that this property is not "threatened" or under threat of being lost as open space. A score of 4 in the section of the

chart means that the County should act immediately to try to acquire, regulate, or otherwise preserve the property for its open space values if it is worthy of such action based on its high, moderate or low value for open space. Values of 1, 2, or 3 indicate a range of preservation priority between these extremes.

# NATURAL RESOURCES VALUING CHART

OPEN SPACE VALUE		PRIORITY FOR PRESERVATION	
<p><b>HIGH</b></p> <p>In County Open Space Policy Area? Y(1) / N(0)</p> <p>In County Wildlife Corridor? Y(1) / N(0)</p> <p>In BLM Area of Critical Environmental Concern? Y(1) / N(0)</p> <p>In SCAQ Area of Regional Significance? Y(1) / N(0)</p> <p>Only example in County of resource(s) or feature(s)? Y(1) / N(0)</p> <p>Rare, threatened, or endangered species present on property? Y(1) / N(0)</p> <p>Is land in an undeveloped, natural state? Y(1) / N(0)</p> <p>Blue line stream(s) on property? Y(1) / N(0)</p> <p>Body of water present such as a lake, pond, stream, etc? Y(1) / N(0)</p> <p>Riparian lands present on site? Y(1) / N(0)</p> <p>Can land also be used for some recreational/trails purposes? Y(1) / N(0)</p> <p>Is land in a flood plain, fault zone, or pipeline easement? Y(1) / N(0)</p>		<p><b>HIGH</b></p> <p>Under private conservation group or public ownership/control? Y(0) / N(1)</p> <p>Threatened by encroaching development? Y(1) / N(0)</p> <p>Designated as surplus land by County or other public agency? Y(1) / N(0)</p> <p>Within a city sphere of influence? Y(1) / N(0)</p>	
<p><b>MODERATE</b></p> <p>Good example of resource(s) or feature(s) on site? Y(1) / N(0)</p> <p>Are species listed by CNDDB as "special" or "of concern" present on site? Y(1) / N(0)</p> <p>Are species listed by CNDDB as "special" or "of concern" present on site? Y(1) / N(0)</p> <p>Blue line stream(s) on property? Y(1) / N(0)</p> <p>Body of water present such as a lake, pond, stream, etc? Y(1) / N(0)</p> <p>Riparian lands present on site? Y(1) / N(0)</p> <p>Can land also be used for some recreational/trails purposes? Y(1) / N(0)</p> <p>Is land in a flood plain, fault zone, or pipeline easement? Y(1) / N(0)</p>		<p><b>MODERATE</b></p> <p>Threatened by encroaching development? Y(1) / N(0)</p> <p>Designated as surplus land by County or other public agency? Y(1) / N(0)</p> <p>Within a city sphere of influence? Y(1) / N(0)</p>	
<p><b>LOW</b></p> <p>Common/fair example of resource(s) or feature(s) on site? Y(1) / N(0)</p> <p>Common native species present on site? Y(1) / N(0)</p> <p>Common native species present on site? Y(1) / N(0)</p> <p>Blue line stream(s) on property? Y(1) / N(0)</p> <p>Body of water present such as a lake, pond, stream, etc? Y(1) / N(0)</p> <p>Riparian lands present on site? Y(1) / N(0)</p> <p>Can land also be used for some recreational/trails purposes? Y(1) / N(0)</p> <p>Is land in a flood plain, fault zone, or pipeline easement? Y(1) / N(0)</p>		<p><b>LOW</b></p> <p>Threatened by encroaching development? Y(1) / N(0)</p> <p>Designated as surplus land by County or other public agency? Y(1) / N(0)</p> <p>Within a city sphere of influence? Y(1) / N(0)</p>	

\* California Natural Diversity Data Base

May not be suitable for natural resources preservation

To determine Priority, add point totals as shown. Points may be added for "Yes" or "No" answers

Project File No: \_\_\_\_\_

COUNTY REGION  
Valley \_\_\_\_\_  
Mountain \_\_\_\_\_  
Desert \_\_\_\_\_

Property Owner Name / Address  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Acres \_\_\_\_\_

OTHER VALUING CHARTS COMPLETED FOR SAME PROPERTY:  
Agricultural Preservation: \_\_\_\_\_  
Trails: \_\_\_\_\_  
Recreation Banks: \_\_\_\_\_  
Natural Resources: \_\_\_\_\_

VALUING INITIATED BY:  
Staff Review \_\_\_\_\_  
General Public \_\_\_\_\_  
Supervisor \_\_\_\_\_  
Open Space/Parks District \_\_\_\_\_  
Other \_\_\_\_\_

OPEN SPACE VALUE LEVEL AND POINT RANKING

	Max Pts.	Pts. Earned
HIGH	12	_____
MODERATE	13	_____
LOW	12	_____

PRIORITY FOR PRESERVATION POINT RANKING

Point Total: \_\_\_\_\_ (Max. pts. = 4)

Evaluator Name: \_\_\_\_\_

Date Evaluated: \_\_\_\_\_

Date Project Submitted: \_\_\_\_\_

# AGRICULTURAL LANDS VALUING CHART

II-C-26

OPEN SPACE VALUE		PRIORITY FOR PRESERVATION	
<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;">                     In Agricultural Reserve or Special Agricultural Policy Area?                 </div> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>Y(1) → In Agricultural use now?</p> <p>N(0) → In Agricultural use now?</p> </div> <div style="width: 45%;"> <p>Y(1) → In Agricultural use now?</p> <p>N(0) → Is land presently undeveloped?</p> </div> </div> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>Y(1) → Is land adjacent to other active agricultural areas?</p> <p>N(0) → Is land adjacent to other active agricultural areas?</p> </div> <div style="width: 45%;"> <p>Y(1) → Prime Agricultural Soils?</p> <p>N(0) → Visible from public open space or scenic?</p> </div> </div>		HIGH	
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>Y(1) → In Agricultural use now?</p> <p>N(0) → In Agricultural use now?</p> </div> <div style="width: 45%;"> <p>Y(1) → Is land adjacent to other active agricultural areas?</p> <p>N(0) → Is land adjacent to other active agricultural areas?</p> </div> </div> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>Y(1) → Prime Agricultural Soils?</p> <p>N(0) → Visible from public open space or scenic?</p> </div> <div style="width: 45%;"> <p>Y(1) → Prime Agricultural Soils?</p> <p>N(0) → Visible from public open space or scenic?</p> </div> </div>		MODERATE	
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>Y(1) → Is land presently undeveloped?</p> <p>N(0) → Is land presently undeveloped?</p> </div> <div style="width: 45%;"> <p>Y(1) → Prime agricultural soils?</p> <p>N(0) → Prime agricultural soils?</p> </div> </div> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>Y(1) → Visible as "public open space" or scenic?</p> <p>N(0) → Visible as "public open space" or scenic?</p> </div> <div style="width: 45%;"> <p>Y(1) → Is land adjacent to other active agricultural areas?</p> <p>N(0) → Is land adjacent to other active agricultural areas?</p> </div> </div>		LOW	

May not be suitable for agricultural preservation

To determine Priority, add point totals as shown. Points may be added for "Yes" or "No" answers

Is land within a City and not zoned for agriculture?

Y(1) → Threatened by encroachment from development/annexation, etc.?

N(0) → Threatened by encroachment from development/annexation, etc.?

Y(1) → Are urban services available at a level to support development?

N(0) → Are urban services available at a level to support development?

Y(1) → Any other entities intending to preserve in agricultural use?

N(0) → Any other entities intending to preserve in agricultural use?

Project File No: \_\_\_\_\_

COUNTY REGION \_\_\_\_\_

Valley \_\_\_\_\_

Mountain \_\_\_\_\_

Desert \_\_\_\_\_

Property Owner Name/Address \_\_\_\_\_

Acres \_\_\_\_\_

OTHER VALUING CHARTS COMPLETED FOR SAME PROPERTY:

Agricultural Preservation: \_\_\_\_\_

Trails: \_\_\_\_\_

Recreation: \_\_\_\_\_

Scenic: \_\_\_\_\_

Natural Resources: \_\_\_\_\_

VALUING INITIATED BY:

Staff Review: \_\_\_\_\_

General Public: \_\_\_\_\_

Superior: \_\_\_\_\_

Open Space/Parks District: \_\_\_\_\_

Other: \_\_\_\_\_

OPEN SPACE VALUE LEVEL AND POINT RANKING		
	Max Pts.	Pts. Earned
HIGH	5	_____
MODERATE	4	_____
LOW	4	_____

PRIORITY FOR PRESERVATION POINT RANKING

Point Total (Max. pts. = 4) \_\_\_\_\_

Evaluators Name: \_\_\_\_\_

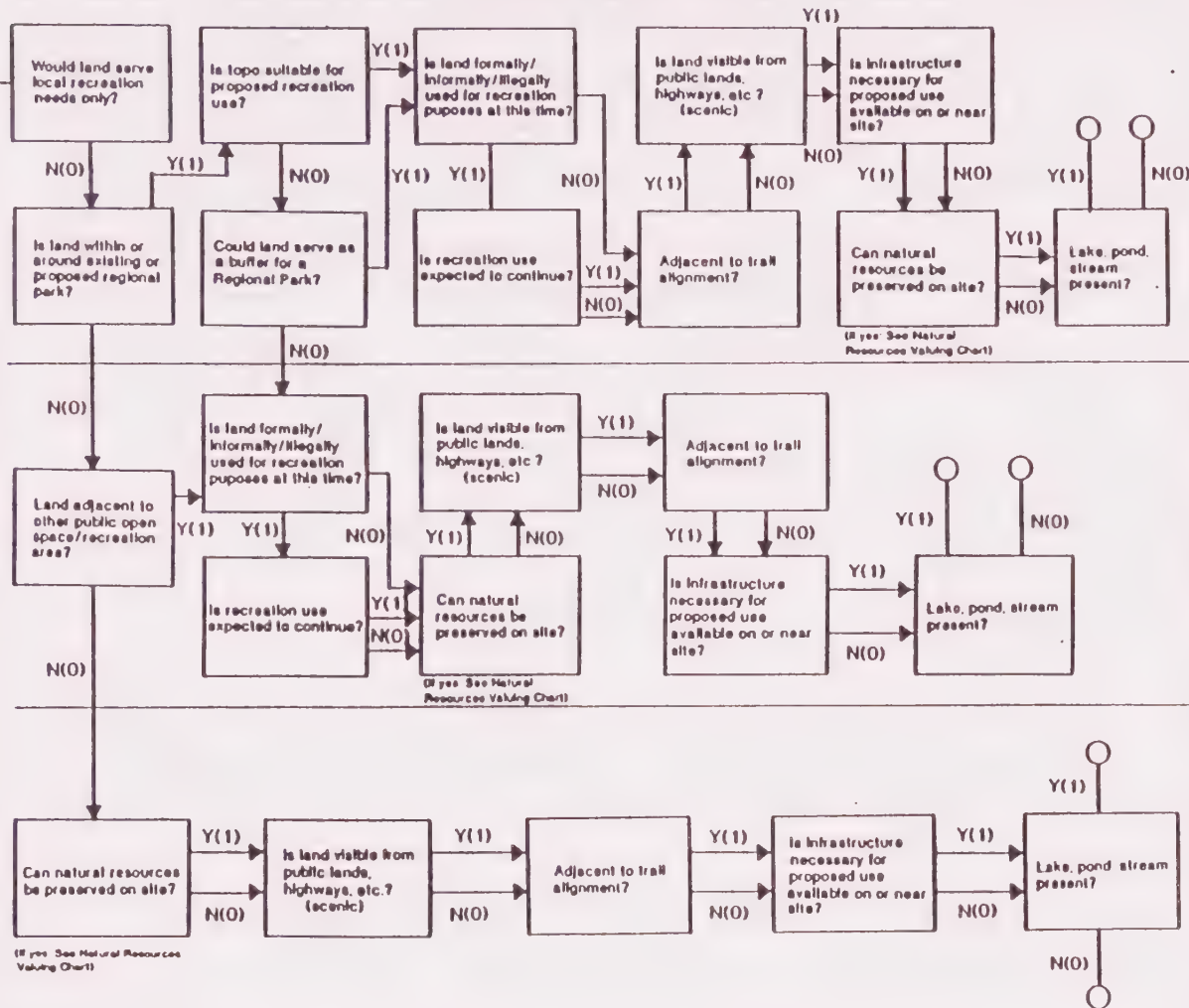
Date Evaluated: \_\_\_\_\_

Date Project Submitted: \_\_\_\_\_

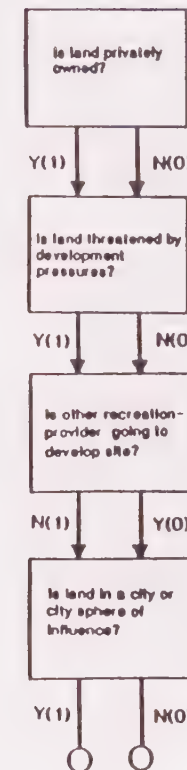
FIGURE 2

# RECREATIONAL LANDS VALUING CHART

## OPEN SPACE VALUE



## PRIORITY FOR PRESERVATION



To determine Priority, add point totals as shown. Points may be added for "Yes" or "No" answers

Project File No: \_\_\_\_\_

COUNTY REGION \_\_\_\_\_

Valley \_\_\_\_\_

Mountain \_\_\_\_\_

Desert \_\_\_\_\_

Property Owner Name/ Address \_\_\_\_\_

Acres \_\_\_\_\_

OTHER VALUING CHARTS COMPLETED FOR SAME PROPERTY:

Agricultural Preservation: \_\_\_\_\_

Trails: \_\_\_\_\_

Recreation Scenic: \_\_\_\_\_

Natural Resources: \_\_\_\_\_

VALUING INITIATED BY:

Staff Review \_\_\_\_\_

General Public \_\_\_\_\_

Supervisor \_\_\_\_\_

Open Space/ Parks District \_\_\_\_\_

Other \_\_\_\_\_

OPEN SPACE VALUE LEVEL AND POINT RANKING

	Max Pts.	Pts. Earned
HIGH:	9	_____
MODERATE:	8	_____
LOW:	6	_____

PRIORITY FOR PRESERVATION POINT RANKING

Point Total: (Max. pts. = 4) \_\_\_\_\_

Evaluator Name: \_\_\_\_\_

Date Evaluated: \_\_\_\_\_

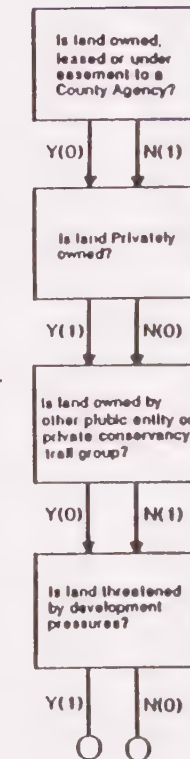
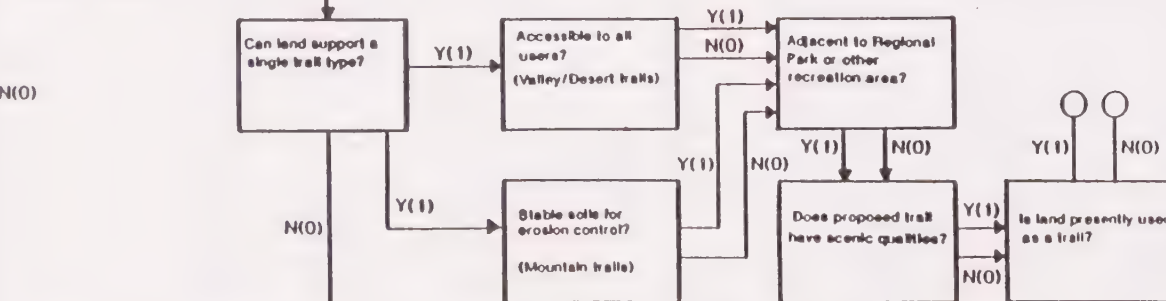
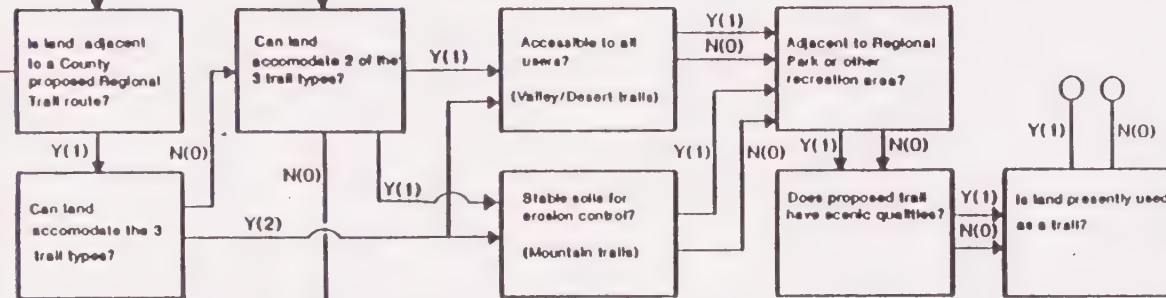
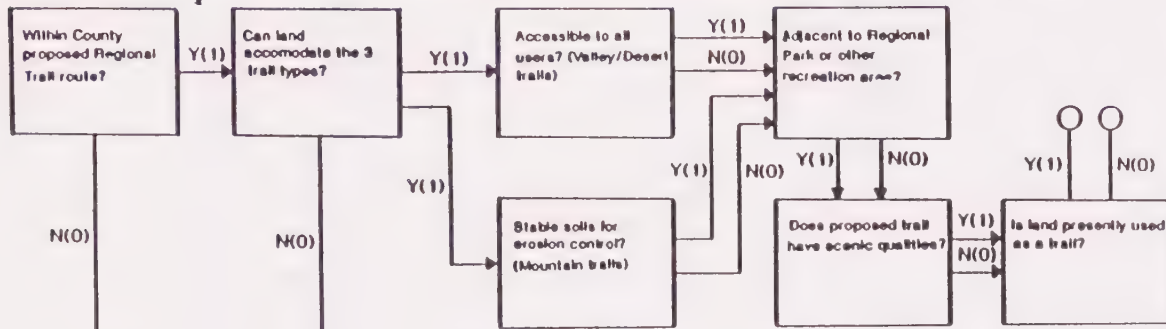
Date Project Submitted: \_\_\_\_\_

Consult with local recreation provider

# TRAILS VALUING CHART

## OPEN SPACE VALUE

## PRIORITY FOR PRESERVATION



To determine Priority, add point totals as shown. Points may be added for "Yes" or "No" answers.

Project File No: \_\_\_\_\_

COUNTY REGION

Valley \_\_\_\_\_

Mountain \_\_\_\_\_

Desert \_\_\_\_\_

Property Owner Name/Address  
\_\_\_\_\_  
\_\_\_\_\_

Acres \_\_\_\_\_

OTHER VALUING CHARTS COMPLETED FOR SAME PROPERTY:

Agricultural Preservation: \_\_\_\_\_

Trails: \_\_\_\_\_

Recreation: \_\_\_\_\_

Scenic: \_\_\_\_\_

Natural Resources: \_\_\_\_\_

VALUING INITIATED BY:

Staff Review: \_\_\_\_\_

General Public: \_\_\_\_\_

Superior: \_\_\_\_\_

Open Space/Parks District: \_\_\_\_\_

Other: \_\_\_\_\_

OPEN SPACE VALUE LEVEL AND POINT RANKING

	Max Pts.	Pts. Earned
HIGH	8	_____
MODERATE	7	_____
LOW	6	_____

PRIORITY FOR PRESERVATION POINT RANKING

Point Total: \_\_\_\_\_  
(Max. pts = 4)

Evaluator Name: \_\_\_\_\_

Date Evaluated: \_\_\_\_\_

Date Project Submitted: \_\_\_\_\_

II-C-28

May not be suitable for County regional trail

SECTION 4. TRAILS

Because they provide public access to open space lands and serve as an active recreational amenity, trails form an important part of the County's overall open space plan. The establishment of a regional trails system is envisioned in the Open Space Goal C-30, which seeks,

A regional system of trails that complements and interconnects with existing and proposed federal, state, and local trail systems.

As part of this system, trails will be used to provide public entry into open space areas, to direct public access to those areas which can safely withstand human activity, to provide alternative transportation opportunities, and to provide a sense of the County's history.

This portion of the Open Space/Trails section of the General Plan describes the proposed Regional Trails Plan and the policies and programs which will be used to implement this system.

A. Existing Trails

Although local trail systems are located throughout San Bernardino County, only two "regional" trails (those which serve as important trail links within the County) currently exist. These are the Pacific Crest Trail, which traverses the southwestern portion of the County, and the Santa Ana River trail (currently in the detailed planning stage), which will connect the headwaters of the Santa Ana River with the river's outlet at the Pacific Ocean in Orange County. Information on these trails is summarized below.

TABLE C  
EXISTING TRAILS

<u>Trail</u>	<u>Miles</u>
1. Pacific Crest Trail	113.7*
2. Santa Ana River Trail	52**

\* Length within San Bernardino County; total length is 2,620 miles.

\*\* Length within San Bernardino County; total length is 110 miles.

The Pacific Crest Trail, while serving as a regional link within the County, is maintained by the federal government; the U.S. Forest Service should be consulted if detailed information on this facility is required.

The Santa Ana River Trail master plan contains detailed information on the alignment of that trail and the uses which are proposed along the trail and at various trailheads. The master plan, which is maintained by the

Regional Parks Department, should be consulted if detailed information on the trail is desired.

General alignments of both of these trails are shown on the Resources Overlay.

#### B. Planned Trails

The following information relates to the proposed regional trails shown on the Resources Overlay. For more specific information, consult the Open Space Background Appendix.

##### 1. Types of Trails

The plan of regional trails which is shown on the Resources Overlay includes two general types of trails: **Active Regional** trails, which are proposed to be constructed for active use by pedestrians, equestrians, and bicyclists; and **Historic/Desert** trails, which are not proposed to be constructed by the County but identified only through signage or interpretive (educational) facilities. Some portions of active trails may be historic, in which case signage identifying the historic nature of the trail should be provided. All or portions of historic trails may be constructed as active trails by other agencies, such as the State of California, the federal government, or local cities.

Active Trails are further defined as being either **Primary Trails**, which are expected to serve as major trail routes, and **Secondary Trails**, which will link adjacent areas with the primary trails.

##### 2. Proposed Regional Trails

The trails shown in Table D are proposed to be constructed or identified as part of the regional trails system.

TABLE D  
PROPOSED REGIONAL TRAILS

<u>Trail Name</u>	<u>Length (Miles)</u> <sup>1</sup>	<u>Uses/Notes</u>
<b>Active Trails:</b>		
Baseline Road Trail	21.1	<p><u>Route:</u> This trail follows Baseline Road, beginning at the County line on the west and ending at the Cajon Creek Trail on the east, near Rialto and San Bernardino.</p> <p><u>Uses:</u> Multiple uses, including pedestrian, equestrian, and bicycling. Equestrian use may not be appropriate in areas where separation from roadways is not possible. Some portions of trail may be located within Southern Pacific Transit Company right of way. Separate trails for each use if possible.</p> <p>This is a Primary Trail.</p>
Cajon Creek Trail	20.3	<p><u>Route:</u> This trail follows Cajon Creek, beginning north of the community of Devore at the Pacific Crest Trail and extending southward along the creek channel to its terminus at the Santa Ana River.</p> <p><u>Uses:</u> Multiple uses, including hiking, equestrian, and bicycling. Opportunities for wildlife viewing along portions of trail; also, need to keep trail activities separated from sensitive biological areas. This trail passes through undeveloped areas, and may require installation of comfort stations, rest/water stops, and similar amenities. Plan for mountain bike use, due to proximity to national forest. Separate trails for each use if possible.</p> <p>This is a Primary Trail.</p>

TABLE D (Cont'd)  
PROPOSED REGIONAL TRAILS

<u>Trail Name</u>	<u>Length (Miles)</u> <sup>1</sup>	<u>Uses/Notes</u>
Chino Hills Connector	4.7	<p><u>Route:</u> This trail extends from the San Antonio Creek Trail southwest into the Chino Hills State Park.</p> <p><u>Uses:</u> Multiple uses, including hiking, equestrian, and bicycling. Plan for mountain bike use, due to proximity to Chino Hills State Park. Separate trails for each use if possible.</p> <p>This is a Secondary Trail.</p>
City Creek Trail	5.6	<p><u>Route:</u> This follows City Creek, beginning at the creek's terminus at the Santa Ana River and extending northward into the national forest. At the trail's northern terminus, opportunities exist for connection with trails in the national forest.</p> <p><u>Uses:</u> Multiple uses, including hiking, equestrian, and bicycling. Plan for mountain bike use, due to proximity to national forest.</p> <p>This is a Secondary Trail.</p>
Crafton Hills Trail	8.9	<p><u>Route:</u> This trail circles the proposed Crafton Hills open space area at an elevation of approximately 2,400 feet, providing connections to the Live Oak Canyon Trail and the Mill Creek Trail.</p> <p><u>Uses:</u> Routed around perimeter of proposed Crafton Hills Open Space area. Multiple uses, including hiking, equestrian, and mountain bicycling. May require "low intensity" standards due to steep terrain in some areas.</p> <p>This is a Secondary Trail.</p>

TABLE D (Cont'd)  
PROPOSED REGIONAL TRAILS

<u>Trail Name</u>	<u>Length (Miles)<sup>1</sup></u>	<u>Uses/Notes</u>
Cucamonga Canyon Trail		<p><u>Route:</u> This trail generally follows the West Cucamonga Truck Trail and Barrett Stoddard Truck Trail west from the Cucamonga Creek Trail and north to San Antonio Canyon, just below Mt. Baldy Village.</p> <p><u>Uses:</u> Multiple uses including hiking, equestrian, and mountain bicycling.</p> <p>This is a Secondary Trail.</p>
Cucamonga Creek Trail	29.8	<p><u>Route:</u> This trail generally follows the route of Cucamonga Creek, providing a connection between the Rancho Cucamonga area and the Santa Ana River. The northern reach of this trail extends through the national forest north of Rancho Cucamonga and ultimately connects with the Lytle Creek Trail. In its southern reach, this trail will be constructed primarily within land controlled by the County Flood Control District.</p> <p><u>Uses:</u> Multiple uses, including hiking, equestrian, and mountain bicycling. Due to route through urban areas, potential for use as alternative commuting route.</p> <p>This is a Primary Trail.</p>
Day Creek Trail	10.0	<p><u>Route:</u> This trail follows a north-south route along Day Creek, primarily using lands controlled by the County Flood Control District. The northern terminus of this trail is at the Frontline Trail; the southern terminus is the County line, where this trail could link with the Riverside County trail system.</p>

TABLE D (Cont'd)  
PROPOSED REGIONAL TRAILS

<u>Trail Name</u>	<u>Length (Miles)<sup>1</sup></u>	<u>Uses/Notes</u>
		<p><u>Uses:</u> Multiple uses, including hiking, equestrian, and mountain bicycling. Due to route through urban areas, potential for use as alternative commuting route.</p> <p>This is a Primary Trail.</p>
Deer Creek Trail	6.4	<p><u>Route:</u> This trail generally follows the route of Deer Creek, connecting the Day Creek Trail with Cucamonga-Guasti Regional Park.</p> <p><u>Uses:</u> Multiple uses, including hiking, equestrian, and mountain bicycling. Due to route through urban areas, potential for use as alternative commuting route.</p> <p>This is a Secondary Trail.</p>
Demens Creek Trail		<p><u>Route:</u> This trail generally follows Demens Creek</p> <p><u>Uses:</u></p>
Devils Canyon Connector	7.8	<p><u>Route:</u> This trail provides a connection between the Rialto Trail and the Devils Canyon Recreation Area. Its route follows Casa Grande Drive, crosses the Cajon Creek Trail north of Muscoy, and then continues to the Recreation Area and the National Forest along the general alignment of the California Aqueduct.</p> <p><u>Uses:</u> Multiple uses, including hiking, equestrian, bicycling, and mountain bicycling as terrain permits. May require "low intensity" standards due to steep terrain.</p> <p>This is a Secondary Trail.</p>

TABLE D (Cont'd)  
PROPOSED REGIONAL TRAILS

<u>Trail Name</u>	<u>Length (Miles)</u> <sup>1</sup>	<u>Uses/Notes</u>
Edison/Schaefer Connector	10.4	<p><u>Route:</u> This trail extends eastward from the San Antonio Creek Trail, following Edison Avenue east to Euclid Avenue, then north to Schaefer Avenue, east to the county line, north to Riverside Avenue, east to Etiwanda, north to the approximate alignment of Philadelphia, and then east to its terminus at the Jurupa Trail.</p> <p><u>Uses:</u> Multiple uses, including hiking, equestrian, bicycling and mountain bicycling. Due to route through urban areas, potential for use as alternative commuting route.</p> <p>This is a Secondary Trail.</p>
Frontline Trail	15.0	<p><u>Route:</u> This trail generally follows the base of the mountains north of the communities of Upland, Rancho Cucamonga, and Fontana. This trail provides an east-west connection between the San Antonio Creek Trail and the Frontline Connector Trail.</p> <p><u>Uses:</u> Multiple uses, including hiking, equestrian, and bicycling. Opportunities for wildlife viewing along portions of trail; also, need to keep trail activities separated from sensitive biological areas. This trail passes through undeveloped areas, and may require installation of comfort stations, rest/water stops, and similar amenities. Plan for mountain bike use, due to proximity to national forest. Separate trails for each use if possible.</p> <p>This is a Primary Trail.</p>

TABLE D (Cont'd)  
PROPOSED REGIONAL TRAILS

<u>Trail Name</u>	<u>Length (Miles)</u> <sup>1</sup>	<u>Uses/Notes</u>
Frontline Connector	4.4	<p><u>Route:</u> This trail connects the eastern terminus of the Frontline Trail with the Lytle Creek Trail and western terminus of the Greenbelt Trail. The alignment of this trail generally follows Sierra Avenue and Devore Road.</p> <p><u>Uses:</u> Multiple uses, including hiking, equestrian, and mountain bicycling.</p> <p>This is a Secondary Trail.</p>
Greenbelt Trail	21.9	<p><u>Route:</u> This trail generally follows the base of the mountains and foothills east of the Cajon Pass, from Cajon Creek to the Santa Ana River Trail. A detailed routing plan for this trail has been developed by the City of San Bernardino in coordination with civilian volunteers which should be considered by the County.</p> <p><u>Uses:</u> Multiple uses, including hiking, equestrian, and bicycling. Opportunities for wildlife viewing along portions of trail; also, need to keep trail activities separated from sensitive biological areas. This trail passes through undeveloped areas, and may require installation of comfort stations, rest/water stops, and similar amenities. Plan for mountain bike use, due to proximity to national forest. Separate trails for each use if possible.</p> <p>This is a Primary Trail.</p>
Jurupa Hills Trail	7.5	<p><u>Route:</u> This trail circles and traverses the Jurupa Hills area in the southern portion of Fontana, and includes two links to the Santa Ana River Trail in</p>

TABLE D (Cont'd)  
PROPOSED REGIONAL TRAILS

<u>Trail Name</u>	<u>Length (Miles)<sup>1</sup></u>	<u>Uses/Notes</u>
		Riverside County. Since this trail lies within two counties, effective coordination between agencies will be essential.
		<u>Uses:</u> Multiple uses, including hiking, equestrian, and mountain bicycling. May require "low intensity" standards due to steep terrain in some areas. Potential for connection to regional park in Riverside County; routing should be coordinated with County of Riverside.
		This is a Secondary Trail.
Live Oak Canyon Trail	5.8	<u>Route:</u> This trail follows the route of Wilson Creek from Yucaipa Regional Park to the San Timoteo Creek Trail.
		<u>Uses:</u> Multiple uses, including hiking, equestrian, and bicycling. Opportunities for wildlife viewing along portions of trail; also, need to keep trail activities separated from sensitive biological areas. This trail passes through undeveloped/rural areas, and may require installation of comfort stations, rest/water stops, and similar amenities.
		This is a Secondary Trail.
Lytle Creek Trail	12.9	<u>Route:</u> This trail follows the route of Lytle Creek from the Pacific Crest Trail to a connection with the Frontline Connector and Devils Canyon Connector trails north of Fontana.
		<u>Uses:</u> Multiple uses, including hiking, equestrian, and bicycling or mountain bicycling, depending on terrain. Opportunities for wildlife viewing along

TABLE D (Cont'd)  
PROPOSED REGIONAL TRAILS

<u>Trail Name</u>	<u>Length (Miles)<sup>1</sup></u>	<u>Uses/Notes</u>
		portions of trail; also, need to keep trail activities separated from sensitive biological areas. This trail passes through undeveloped areas, and may require installation of comfort stations, rest/water stops, and similar amenities. Plan for mountain bike use, due to proximity to national forest. Separate trails for each use if possible.
		This is a Secondary Trail.
Mid-City Connector	7.3	<u>Route:</u> This trail connects the Santa Ana River Trail and San Timoteo Creek Trail through San Bernardino, extending northward to the Greenbelt Trail and the National Forest.  <u>Uses:</u> Multiple uses, including hiking, equestrian, and mountain bicycling. Due to route through urban areas, potential for use as alternative commuting route.
		This is a Secondary Trail.
Mill Creek Trail	13.5	<u>Route:</u> This trail follows the route of Mill Creek, linking the Santa Ana River Trail near Angelus Oaks with the Santa Ana River Trail near Mentone and Highland.  <u>Uses:</u> Multiple uses, including hiking, equestrian, and bicycling or mountain bicycling, depending on terrain. Opportunities for wildlife viewing along portions of trail; also, need to keep trail activities separated from sensitive biological areas. This trail passes through undeveloped areas, and may require installation of comfort stations, rest/water stops, and similar

TABLE D (Cont'd)  
PROPOSED REGIONAL TRAILS

<u>Trail Name</u>	<u>Length (Miles)</u> <sup>1</sup>	<u>Uses/Notes</u>
		amenities. Plan for mountain bike use, due to proximity to national forest. Separate trails for each use if possible.
Reche Canyon Trail	3.8	<u>Route:</u> This trail follows the general route of Reche Canyon Road southward from the Santa Ana River Trail into Riverside County.  <u>Uses:</u> Multiple uses, including hiking, equestrian, and bicycling or mountain bicycling, depending on terrain. May require "low intensity" standards in some area due to steep terrain.  This is a Secondary Trail.
Rialto Trail	13.3	<u>Route:</u> From its southerly terminus at the Santa Ana River Trail, the Rialto Trail extends northward along Agua Mansa Road, then travels through Rialto adjacent to Cactus Avenue. The trail follows Highland Avenue west to Locust, then north to Casa Grande Drive and west to Sierra Avenue.  <u>Uses:</u> Multiple uses, including hiking, equestrian, and bicycling. Separate trails for each use if possible.  This is a Secondary Trail.
San Antonio Creek Trail	15.9	<u>Route:</u> This trail follows the route of flood control facilities along San Antonio Creek from the San Antonio Heights area north of Upland to the Santa Ana River Trail on the south. Since this trail lies in San Bernardino and Los Angeles counties, effective coordination between agencies will be necessary.

TABLE D (Cont'd)  
PROPOSED REGIONAL TRAILS

<u>Trail Name</u>	<u>Length (Miles)</u> <sup>1</sup>	<u>Uses/Notes</u>
		<p><u>Uses:</u> Multiple uses, including hiking, equestrian, and bicycling or mountain bicycling, depending on terrain. Due to route through urban areas, potential for use as alternative commuting route.</p> <p>This is a Primary Trail.</p>
San Timoteo Creek Trail	8.9	<p><u>Route:</u> This trail generally follows the route of San Timoteo Creek, linking the Live Oak Canyon Trail with the Santa Ana River via a route which travels through a largely undeveloped area south of Redlands and Loma Linda.</p> <p><u>Uses:</u> Multiple uses, including hiking, equestrian, and bicycling. Opportunities for wildlife viewing along portions of trail; also, need to keep trail activities separated from sensitive biological areas. This trail passes through undeveloped areas, and may require installation of comfort stations, rest/water stops, and similar amenities. Coordinate routing with County of Riverside.</p> <p>This is a Secondary Trail.</p>
Santa Ana River Trail	50	<p><u>Route:</u> This trail follows the Santa Ana River, from its headwaters near Heart Bar to the County line. For detailed information on this trail, refer to the master plan completed by the Regional Parks Department.</p> <p><u>Uses:</u> Multiple uses, including hiking, equestrian, and bicycling. (See detailed plans in <u>Santa Ana River Corridor Trail System Master Plan</u> for further information.)</p> <p>This is a Primary Trail.</p>

TABLE D (Cont'd)  
PROPOSED REGIONAL TRAILS

<u>Trail Name</u>	<u>Length (Miles)</u> <sup>1</sup>	<u>Uses/Notes</u>
<b>Historic/Desert Trails<sup>2</sup></b>		
Colorado River Trail	85+/-	Proposed State trail along the Colorado River.
Death Valley Trail	75+/-	Proposed State trail from Death Valley National Monument southwest to Los Angeles County, connecting with the proposed Owens Valley State trail.
Mojave Indian Trail	100+/-	Historic trail from the Colorado River near Needles, traveling northwest to Piute Spring, west to Mail Springs, and southwest to Afton Canyon, Yermo, and the Mojave River. Ultimate connection with the Old Spanish Santa Fe and Mormon Trail.
Old Government Military		Historic trail from the site of Fort Mojave on the Colorado River west to Fort Piute, Government Holes, Mail Springs, Fort Soda, Afton Canyon, and Yermo. Periodic connections with Mojave Indian Trail; also linked with Colorado River Trail and Old Spanish Santa Fe and Mormon Trail.
Old Spanish Santa Fe and Mormon Trail	160+/-	Historic trail connecting Summit Valley via the Mojave River with the cities of Victorville, Hesperia, and Barstow. Ultimate connection to Inyo County.

- Note: All mileage figures are approximate and subject to change based on the completion of detailed route studies.
- Note: Historic Trails are not proposed to be developed by the County but identified only through signage or interpretive (educational facilities) with low usage. Desert Trails are to be constructed by the State.

### C. Trails Goals

The following are the Trails-related goals of the County of San Bernardino.

- C-30 A regional system of trails that complements and interconnects with existing and proposed federal, state, and local trail systems.
- C-31 Provide regional open space for passive and active open space recreation activities (solitude, quiet, hiking, and other low intensity uses).
- C-32 Develop and maintain trailhead access points for all regional trails with facilities appropriate to uses on the trail (hiking, equestrian use, bicycling, and mountain bicycling).
- C-33 Assure dedication of pedestrian and equestrian trails, bikeways, and visual access to major scenic features.

### D. Trails Policies/Actions

The following policies and action items relate to the County's Trails Goals.

- OR-7 Because the County desires to provide a regional trails system, and because achievement of this trail system will require the coordinated implementation of actions related to many County and private actions, subject to funding availability the County shall:
  - a. Provide equestrian, bicycling, and pedestrian staging areas consistent with the master plan of Regional Trails shown on the Resources Overlay and the trail route and use descriptions shown in Table D of this Open Space Element.
  - b. Provide a regional trail system, plus rest areas, to provide continuous interconnecting trails which serve major populated areas of the County and existing and proposed recreation facilities through the regional trail system. The purpose of the County regional trails system shall be to provide major backbone linkages to which community trails might connect. The provision and management of community and local trails will not be the responsibility of the regional trail system.
  - c. Adopt and implement the trail standards shown in this section. The California Highway Design Manual for Bikeway Planning and Design shall be adopted by the County.

- 
- d. Locate trail routes to highlight the County's recreational and educational experiences, including natural, scenic, cultural and historic features.
  - e. Work with local, state and federal agencies, interest groups and private landowners in an effort to promote an interconnecting regional trail system; and to secure trail access through purchase, easements or by other means.
  - f. Use lands already in public ownership or proposed for public acquisition, such as rights of way for flood control channels, abandoned railroad lines and fire control roads for trails wherever possible, in preference to private property.
  - g. Where possible, locate trail easements within County-required easements for private roads.
  - h. Encourage the dedication or offers of dedication of trail easements where appropriate for establishing a planned trails system alignment, or where an established trail is jeopardized by impending development or subdivision activity.
  - i. Do not develop or open trails to public use until a public agency or private organization agrees to accept responsibility for their maintenance.
  - j. Monitor all dedicated public trails and/or easements on a continuing basis and maintain an up-to-date map of all existing and proposed dedicated public trail easements on the Resources Overlay. Existing trail easements or alignments shall be mapped in their correct positions; proposed alignments shall be mapped in general locations. The Resources Overlay shall be reviewed during consideration of applications for permits or development approvals to ensure that new development does not result in loss of existing or potential public use of dedicated easements.
  - k. Provide bicycle and pedestrian trails along major home-work and other travel routes, where appropriate.
  - l. Where feasible, link local equestrian trail and hiking paths with other regional or routes.
  - m. Use active and abandoned road, utility, and railroad rights-of-way for nonvehicular circulation in all new development when found feasible.
  - n. Require proposed development adjacent to trail systems to dedicate land for trail-head access points. Existing right-of-

way and surplus public properties should be utilized for these staging areas whenever possible.

OR-8 Because the countywide trail system will require the application of design standards to ensure the safety of trail users and promote enjoyment of the trails system, the County shall apply the following Trail Use and Design Policies. These standards are intended to serve as a general guide, and may at times be superseded by standards of managing agencies other than San Bernardino County (e.g., U.S. Forest Service standards). Standards may vary depending on use and operation of the trail; more detailed standards for specific trails may be developed at the time specific siting and planning for a trail link is completed.

- a. Establish the trails system for pedestrian, equestrian and bicycling uses only; all motorized vehicles shall be prohibited from using the trail system.
- b. Incorporate where feasible and where the safety and security of all users can be protected, all compatible multiple uses on a single trail. Where a single trail is not feasible, the trail system shall provide alternate or parallel routes so that the trail segment can safely support a variety of uses.
- c. Access should be provided to the maximum extent feasible to trail users of all abilities and all ages, including the physically and visually disabled.
- d. Where possible, design new trail development to reduce visitor dependence on the automobile. Where feasible, convenient and efficient transit should be provided to enable trail users to gain access to the trail system.
- e. Trails along river and stream corridors shall be sited and designed to avoid impacts to the riparian vegetation, wildlife, and water quality. Recommended measures might include control of run-off and erosion, contouring and siting of trails to conform to the natural topography, and separating and screening trails from sensitive areas.
- f. Development of trails in natural areas shall be compatible with the character of the natural environment and shall be designed to ensure public safety (including fire protection), protect natural resources (including rare and endangered species), and minimize land use conflicts. Due to the fragility of the desert ecosystems special protective actions shall be required where necessary when locating trails in these areas.

- g. Consider the opportunities and constraints of other current land uses including, but not limited to, agricultural and residential land uses, military facilities, sewage treatment plants, landfills, and areas of heavy industry in trail alignment, design, and uses.
- h. Include necessary support facilities, in the trail system, using existing parking lots and other staging areas where possible.
- i. Locate trailheads to be apparent to the public and situated to facilitate supervision.
- j. Begin acquisition of trail easements or rights of way after a trail route plan has been adopted, unless a trail segment is to be acquired through dedication in conjunction with development activity or acts of philanthropy which occur prior to adoption of a route plan.
- k. Encourage the use of volunteers and volunteer organizations to assist in development, operations, maintenance, and education activities related to trails.
- l. Provide for two general levels of trails use:

Low Use and Natural Area standards shall apply to sections of the trail where terrain, remoteness, expected low usage, easement or other restrictions make a larger, multiple trail infeasible.

Urban (Maximum Accessibility) standards define a relatively flat, wide trail for use where little physical challenge is required, and where wheelchair access can be accomplished. The grades are low, and the tread is wide and compacted or surfaced.

- m. Where feasible, trail crossings shall be separated from roadways. Where separated crossings are not feasible, trail crossings shall be designed to occur at controlled intersections.

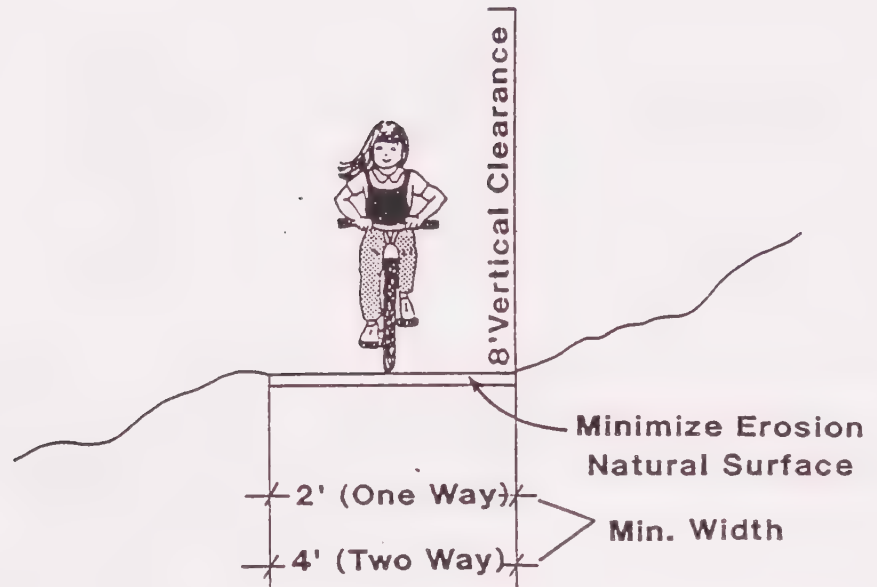
**OR-9** Because adequate physical dimensions for trails are necessary to protect the health and safety of trail users, then the County shall apply the following trail standards, except where superseded by local standards or in situations where site-specific criteria are developed.

In Low Use and Natural areas, the County may consider the use of trail construction standards as defined in Standard Specifications for Construction of Trails, June 1984, published by the U.S. Forest Service.

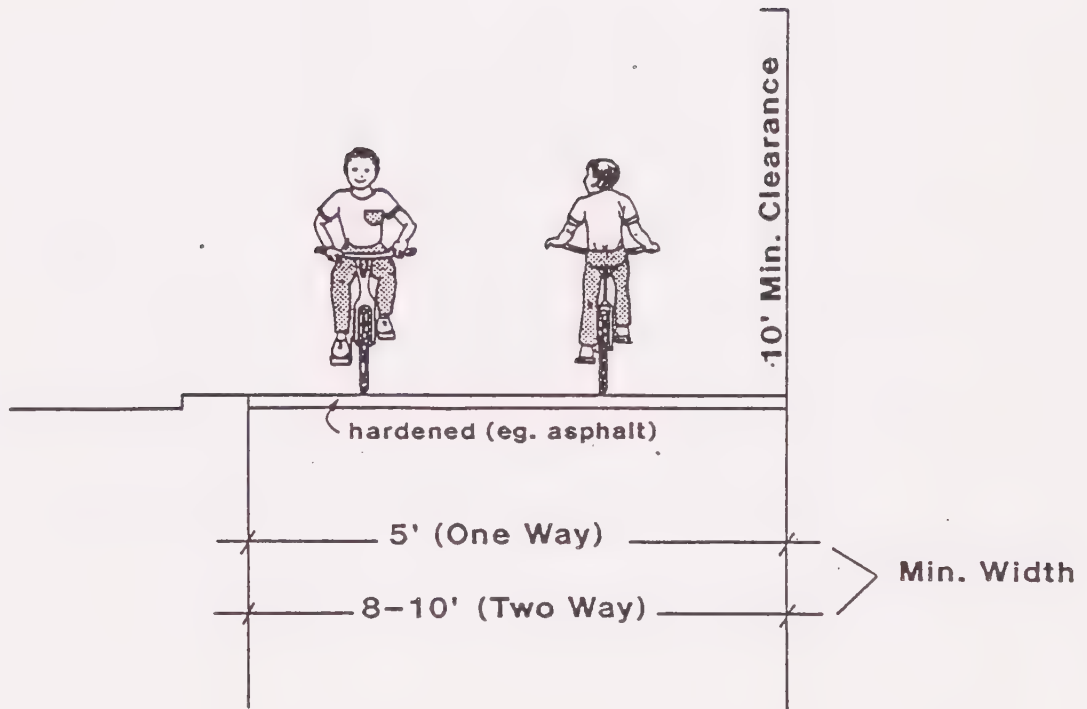
- a. The following Trail Standards shall apply throughout the County, except where superseded by location- or trail-specific considerations. "Maximum Accessibility" standards shall be mandatory in urban areas and desired (but not required) elsewhere.

## LOW USE AND NATURAL AREAS

Mountain Bike Only

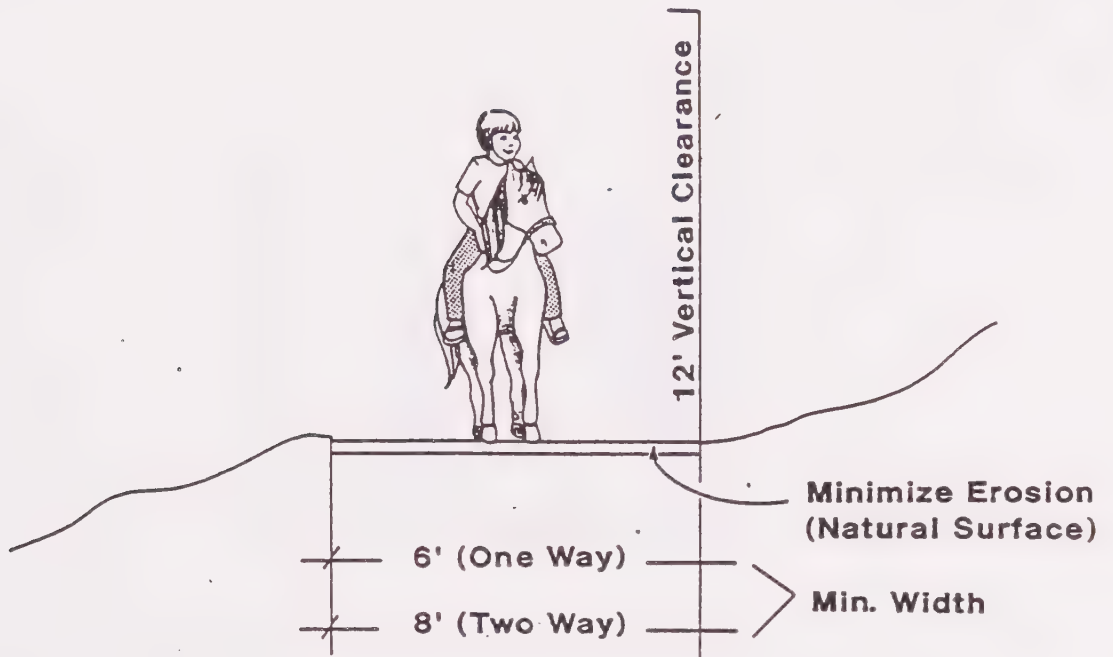


**URBAN**  
**Bicycle Only**



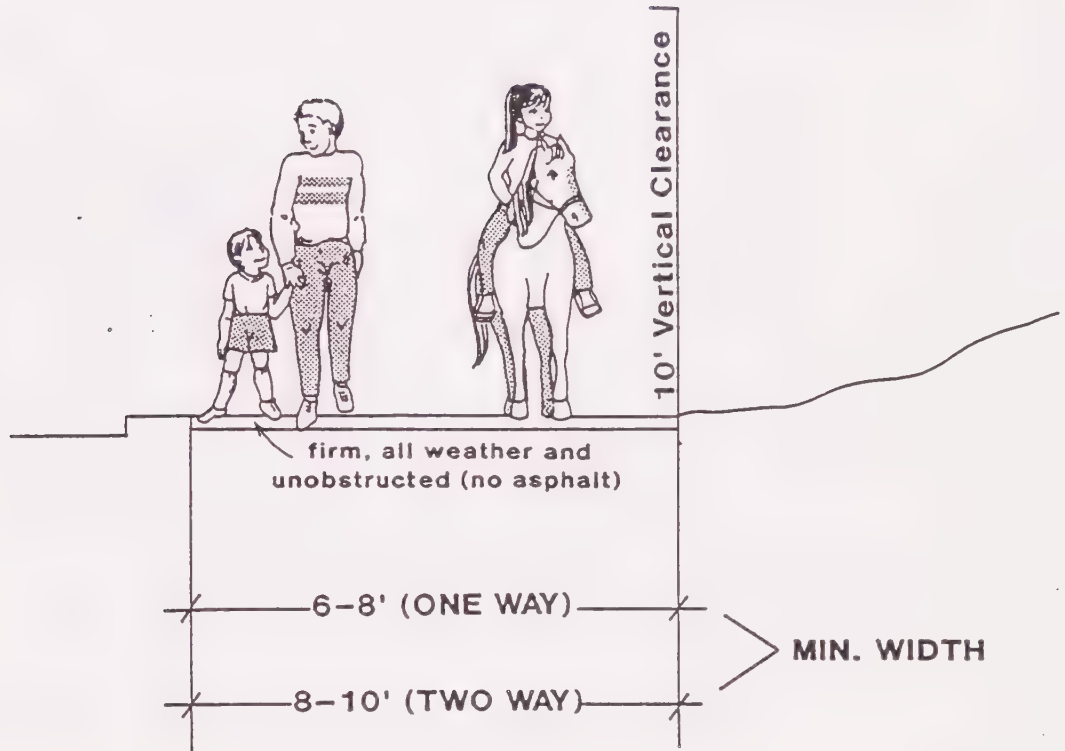
## LOW USE AND NATURAL AREAS

Equestrian Only



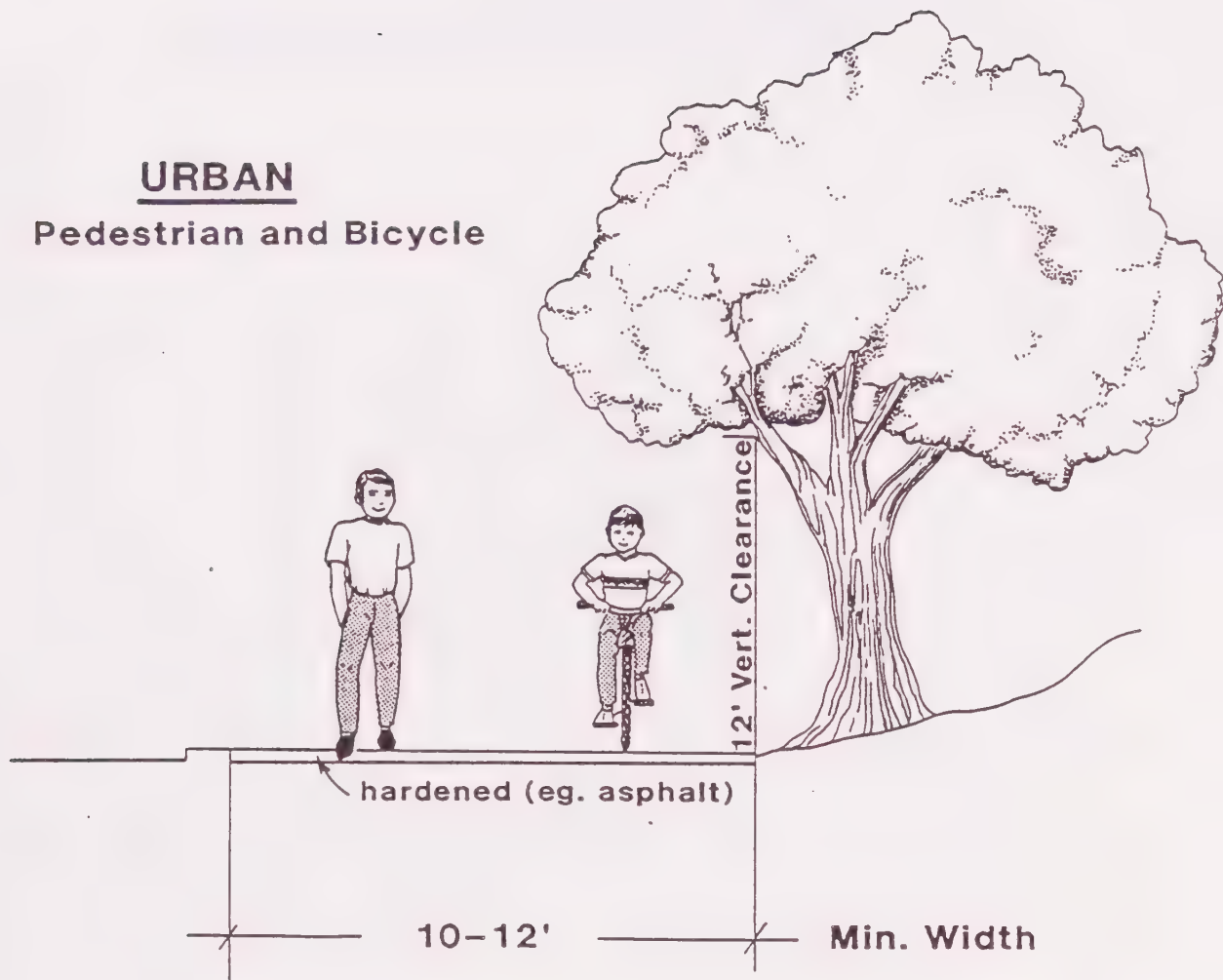
# LOW USE AND NATURAL AREAS

## BICYCLE, HIKING AND EQUESTRIAN



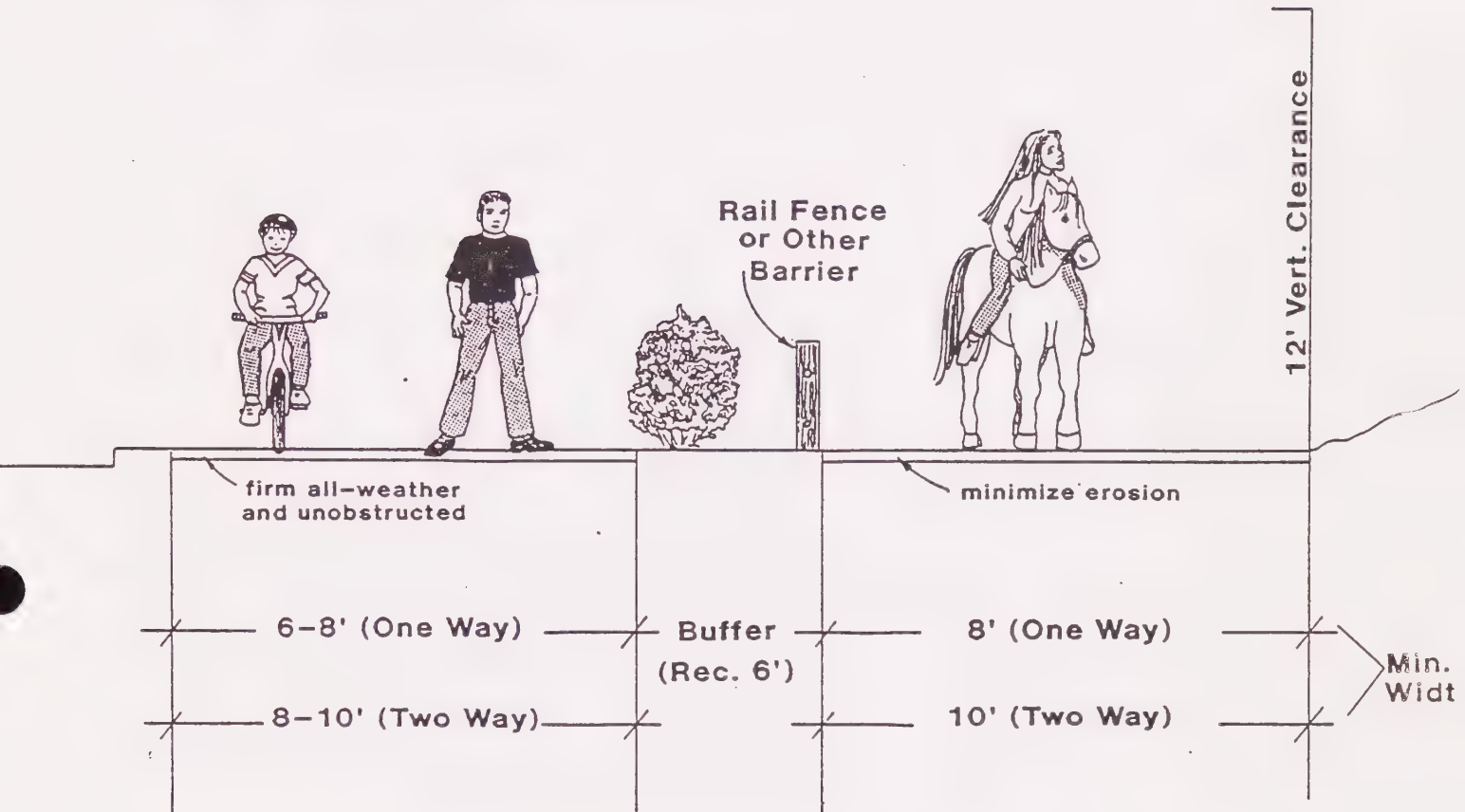
"Low Use" assumes that all uses will not occur simultaneously (pullouts may be necessary in natural areas of high use).

**URBAN**  
**Pedestrian and Bicycle**



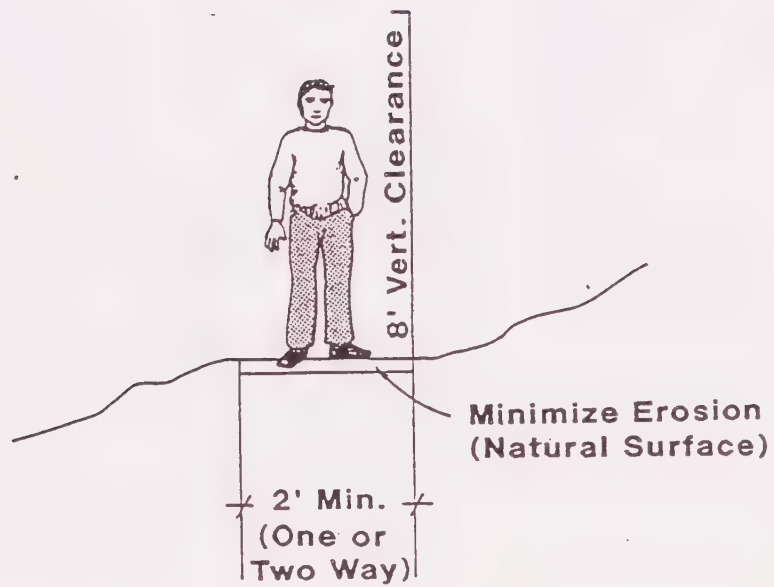
## URBAN

### Bicycle, Hiking and Equestrian Combined In One Easement

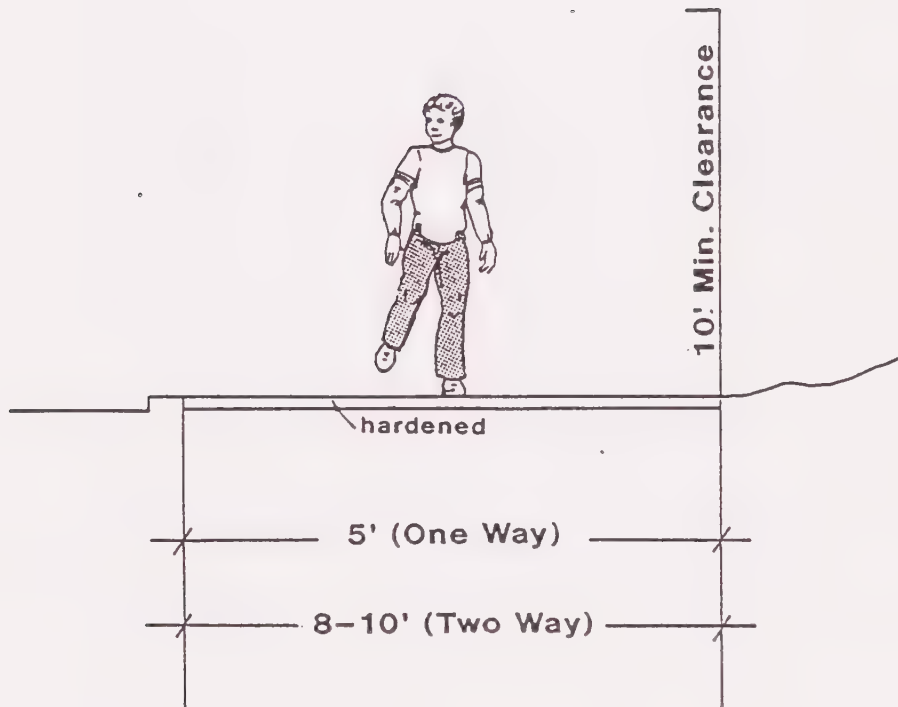


# LOW USE AND NATURAL AREAS

## Hiking Only

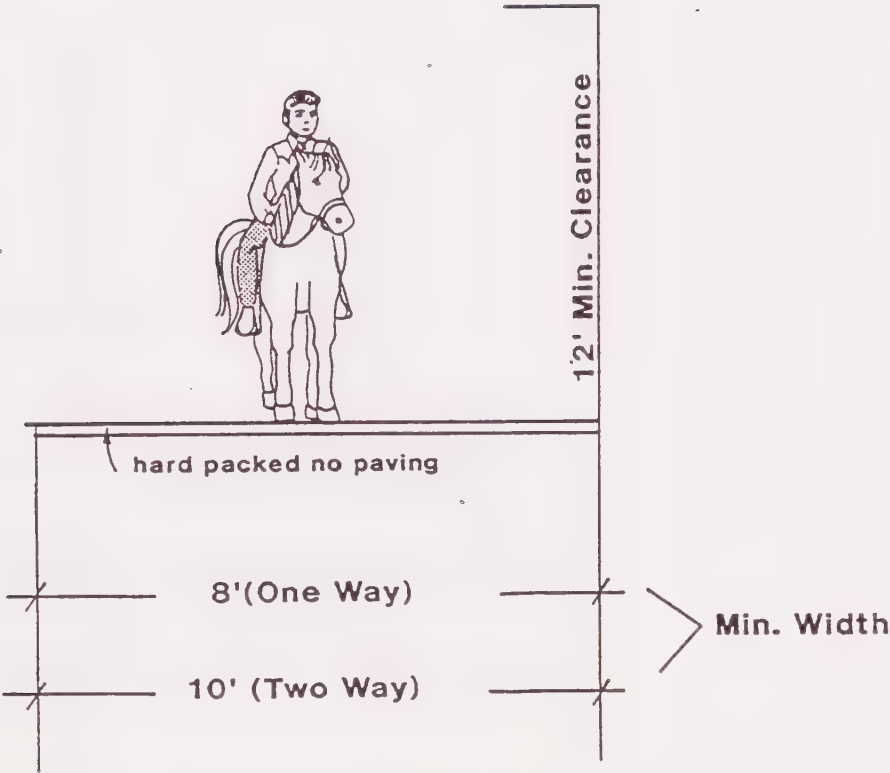


**URBAN**  
**Hiking Only**



**URBAN**

**Equestrian Only**



- Destinations along the trail route, and distances to each, should be identified. This should include distances to vista points or other key trail features, and to connections with other trails.
- Areas where access is hazardous or restricted should be clearly identified. All closed trails should be clearly marked as closed.
- Areas in which dogs or other animals are not allowed should be clearly marked.
- Private property adjacent to trails should be clearly marked.
- Private property adjacent to trails should be clearly identified. All closed trails should be clearly marked.
- Areas in which dogs or other animals are not allowed should be clearly marked.
- Private property adjacent to trails should be clearly marked.
- Areas in which restoration of trails or habitat is in progress should be clearly marked.
- Signage should be provided for trails which are dedicated to or sponsored by an organization or individual.
- Vista points, pullouts, or rest stops should be clearly identified.
- Signage should be provided to inform the public of trail use and etiquette.
- On paved trails and in other appropriate locations, speed limits for bicyclists and equestrians should be clearly marked.

OR-11 Because the County desires to make the regional trail system accessible to a diversity of users, and because accommodating different user types requires the application of specific policies to avoid conflicts and increase user safety, the County shall apply the following policies.

- a. "Multiple uses" on County regional trails in urban areas may include bicycling and hiking. In natural or low-use areas,

multiple use may include any combination of bicycling, hiking, or equestrian uses.

- b. Where possible, a separate bicycle trail is desirable parallel to a hiking/equestrian trail. Separate dual, and if necessary, triple trails are recommended where there is heavy trail use and where several feeder trails join the regional trail system. The Maximum Accessibility standards apply only in urban areas.
- c. A six (6) foot buffer should be maintained wherever possible between bike trails and equestrian/hiking trails.
- d. A Multiple-Use trail where bicycle use is permitted should maintain a 200 foot line-of-sight throughout the length of the trail. The line of sight should allow sufficient time for the bicyclist to slow down, and if necessary, to come to a complete stop to allow other users to pass. If additional line of sight length is required in some areas, the 200-foot standard may be superseded.
- e. Bicycles shall not be permitted on hiking and equestrian trails for safety reasons, except where a separate alignment is not possible. If bicyclists must share a trail with other uses, cyclists must adhere to the following requirements:
  - Alert hikers and equestrians of their presence (particularly when approaching from behind)
  - Travel no faster than 15 mph, unless conditions warrant reduced speed
  - Slow to 5 mph when passing
  - If necessary, bicyclists should dismount and wait for equestrians to pass or signal them through.
- f. The following hierarchy of users shall be followed: Bicyclists must yield right-of-way to all other users. Runners must yield to hikers and equestrians. Hikers must yield to equestrians.

OR-12 Because the safety of the trail system will be enhanced through the application of specific operational guidelines, the County shall:

- a. Accompany the trail design standards with user education. All trail users should be informed of the trail system's trail etiquette requirements through trailhead signs, brochures and by other means.
- b. Temporary Closures - Reserve the right to temporarily close trails to certain uses for the following reasons: When hazardous conditions exist (e.g. floods, landslides), or when trail areas

are soft or wet (and therefore subject to damage) due to rains. Either of these conditions (or others) may require that portions of trails be closed for extended periods of time. Notice of closures shall be given through signage, media outlets, and other appropriate or available means.

- c. Seek to promote adherence to the following code of off-road bicycling responsibility, as developed by the International Mountain Bicycling Association:

**"Ride on Open Trails Only** Respect trail closures, don't trespass, obtain authority as needed. Your riding example will determine what trails remain open to cyclists.

**Control Your Bicycle** Inattention for even a second can cause a disaster. Excessive speed maims and threatens people--there is no excuse for it.

**Always Yield Trail** Make your approach known with a friendly greeting. Show your respect when passing others by slowing to a walk or even stopping. Anticipate that other trail users may be around corners.

**Never Spook Animals** All animals are startled by an unannounced approach, a sudden movement or a loud noise. Give animals extra room and time to adjust to you. In passing, use special care and follow the directions of equestrians. Leave gates as you found them, or as marked.

**Leave No Trace** Practice low-impact cycling. Even on open trails, you shouldn't ride under conditions where you will leave evidence of your passing--such as shortly after a rain. Stay on the trail and don't create any new ones.

**Plan Ahead** Be self-sufficient at all times, keep your machine in good repair and carry necessary supplies for changes in weather or other conditions."

OR-13 Because the establishment of an educational program is important to protect the health and safety of trail users by encouraging proper etiquette and procedures, the County shall implement the following actions.

- a. Establish an education program to communicate to the community an understanding of the trail system's goals and objectives and to convey aspects of trail use. Education in trail use etiquette and low impact use is a key measure towards the reduction of negative trail use impacts.

- b. Establish an education program to acquaint potential trail users with safety considerations, especially for bicycle routes, and on the rules and regulations which apply when using specific trail segments. The primary purpose of this program will be to avoid threats to public safety and minimize accidents.

OR-14 Because proper operation of the regional trails system will rely upon the establishment of a proper management and monitoring program for trail maintenance and use, the County Regional Parks Department shall pursue the following actions.

- a. Develop a management program to monitor trails throughout the trails system. This program should concern itself with delegating management responsibilities to appropriate organizations/agencies for trail segments to ensure that those portions are adequately supervised and maintained.
- b. Monitor public use of the trail system on a regular basis, so that as changes in patterns and levels of trail use are reported, priorities for new trail development and maintenance shall be adjusted accordingly.
- c. Vigorously enforce trail regulations as a means of controlling trail use, and ensure that regulations in different trail segments within various jurisdictions do not conflict.
- d. Develop a program to enlist volunteers and volunteer organizations in trail development, operations, and maintenance, and education activities related to trails.

SECTION 5.        PRESERVATION OF NATURAL RESOURCES

Open space for the protection of natural resources encompasses a variety of areas which are required to maintain biological diversity, to protect significant natural features, and to ensure that future generations will have access to a quality "natural" experience.

The County recognizes that natural areas in and adjacent to the urbanizing portions of the County are today under substantial pressure. As urbanization of the Valley, Mountain, and Desert regions continues, the loss of areas which are capable of supporting both common and endangered plant and animal species is accelerating. No specific figures are available, but the consensus of experts in wildlife biology is that, in many cases, the last vestiges of natural habitat which existed prior to the settlement of the County are either gone or in danger of disappearing.

To address these issues, this section of the Open Space Element provides a guide to information on the critical plant and animal species found in the County, as well as on a variety of other natural resources. This section of the Open Space Element references policies in support of natural resource preservation found elsewhere in the General Plan, and contains specific Open Space policies related to this issue. San Bernardino is an inland County and, as such, does not have coastal beaches, bays or estuaries which require special policies or action programs.

As part of an overall strategy of improving the quality of natural resources within the County, this Open Space Element also contains information and policies related to the establishment of natural open space in urban areas, providing access to open space for the many County residents who live in highly urbanized environments.

A.    Need for Habitat Preservation in San Bernardino County

The need to preserve wildlife habitat, reflected in the inclusion of this Open Space Element in the General Plan, is well documented. As development of the County has taken place (first for agriculture and more recently for housing and other types of development), areas available for wildlife have significantly decreased, particularly in the Valley areas.

Loss of habitat has not been limited to the Valley, however. The San Bernardino mountains are relatively heavily urbanized, and wildlife has been placed in increasing conflict with human settlements in many mountain areas. An article in the Los Angeles Times (Sunday, Dec. 10, 1989) called attention to the result of development on one species in San Bernardino County:

"In Big Bear Valley, one of two existing colonies of an endangered

fish lives a perilous existence in a small pond choked with weeds and garbage. The one-inch, gray and white fish--the unarmored, three-spined stickleback--thrived in a nearby spring-fed stream until it dried up three years ago, a victim of water diversions and over-pumping of wells by the ever-growing Big Bear population. Now the stickleback depends on a one-inch pipe that fills its pond from municipal supplies, a lifesaver arranged by concerned Big Bear residents. "If the pipe breaks, that could be it for the stickleback," said U.S. Forest Service biologist Steve Loe."

The experience of species such as the three-spined stickleback is an extreme example of the effects of development on plant and animal species. However, development of the County has resulted in the decline of many plants and animals. Remaining natural areas in all parts of the County have an increasing value for wildlife.

The County General Plan, the U.S. Forest Service's plan for the national forest areas in the San Bernardino mountains, and the Bureau of Land Management's California Desert Conservation Area (CDCA) Plan (1980, as amended) all address the need to protect these remaining areas, which in many cases are either unique or represent the last example of a particular habitat type.

In many areas of the Valley, losses of habitat include not only natural areas, but agricultural areas. While farmland has only limited value for wildlife (since it is subject to frequent chemical application, mowing, tilling, etc., and generally lacks elements of habitat needed for native animals), the reduction in the amount of "unbuilt" land undoubtedly has some effect on wildlife.

#### B. The Value of Wildlife

Although the local, state, and national commitment to wildlife preservation has been demonstrated through the passing of laws and policies aimed at protecting wildlife, some persons may question the need to protect native species.

Wildlife has value from a number of perspectives. Wildlife managers recognize six general categories of value which can be attached to native species:

Aesthetic Values, which generally reflect the value of plants and animals as attractive parts of the natural environment. The desire of millions of persons to visit the local mountains, which are distinguished by their natural appearance, reflects this value.

Recreational Values, which include hunting, bird watching, nature appreciation (hiking), and photography.

Ecological Values, which reflect the role of native plants and animals in the functioning of the regional ecological system. As part of the food chain, even small insects have an important function, since they support larger animals which in turn support still larger species. The ecological value of native species has been widely publicized in the case of habitats such as the Amazon rain forest. While the extreme diversity of that habitat is not matched in San Bernardino County, the Biological Background Appendix of the General Plan Update notes that, in many areas of the County, not enough is known to make accurate judgments about native plants and animals.

Educational and Scientific Values, which include the value of wildlife as part of the educational process, and its value in the creation of new discoveries. As noted, much remains to be learned about wildlife in the County; the scientific value of its native species remains to be discovered. As part of an expanded awareness of environmental issues, however, the value of native plants and animals in the education of students and the general public is considerable.

Utilitarian Values, which includes the value of native species as a source of diversity which can be exploited for commercial purposes (such as medicinal uses). For instance, the reaction of native species to environmental degradation (a reaction which often occurs faster than that of non-native species) can be used as an indicator to warn of potential harm to man.

Commercial Values, which includes the value of wildlife when it forms an important part of the local economy. In the mountain communities, for instance, wildlife can be said to have a direct commercial value, attracting tourists who spend money and support local economies.

Wildlife can have negative values. Native animals can cause damage to crops and livestock, and can serve as reservoirs for disease. However, the preparation of this Open Space Element recognizes that the positive values of wildlife far outweigh any negative effects, which can themselves be dealt with on a case-by-case basis.

### C. Habitat and Corridor Design

The relatively short history of direct government intervention in the protection of native plants and animals has generally focused primarily on the most threatened species—those in clear danger of extinction. This approach has in some cases focused considerable attention (and funding) on efforts to bring a few individuals of a species back from the brink of extinction (such as in the case of the Trumpeter swan or the California condor).

This strategy is reflected in the County's historic approach to

implementation (and that of most other agencies in the County) of the California Environmental Quality Act. In the implementation of CEQA, mitigation (such as preservation of natural areas) is generally required only when a threatened or endangered species is found. The value of some critical habitats is recognized, but in many cases the elimination of natural areas proceeds with little government intervention.

While efforts to protect critically endangered species and habitats are necessary, a shift is currently under way among wildlife managers to expand the focus to include a broad spectrum of native areas. This habitat-based approach recognizes the value of so-called "indicator species"—such as threatened or endangered plants and animals—which provide the first signs of declining wildlife values. However, this emerging approach also recognizes the role of more common native species as parts of the larger ecological system.

Central to this "habitat-based" approach is the establishment of regional habitat systems which, individually or collectively, provide enough natural area to support the common plants and animals which in turn support all others (including threatened or endangered species). This strategy recognizes that native plants and animals require land of sufficient size to support the diversity of the species.

A wildlife management concept related to habitat preservation is that of the "island effect." Simply put, the "island effect" describes the negative effects of placing native species in the midst of a hostile environment. In the case of an island surrounded by water, for instance, biologists have demonstrated that both the number of species and of individual animals declines over time, due to a number of factors, including inbreeding and competition for scarce food supplies.

This same effect occurs when habitat is surrounded by development. In an undeveloped region, for instance, an animal could move freely from one stand of forest to another, subject only to being attacked by a larger animal. And, as animals left one stand of forest, others could enter from nearby stands. The net effect was a constant shifting of animals, and relative stability in the numbers of individuals.

This effect breaks down in areas in which this same stand of forest (or other habitat) is the last remaining example. In this case, if an animal leaves the stand of forest, it is more likely to be killed (by pesticides, household pets, etc.) or to leave permanently in search of another patch of forest. At the same time, since there are no nearby stands of forest, there are no nearby sources of animals. The result is that the number of animals within the remaining stand declines.

This "island effect" can be corrected by means of a simple concept: wildlife corridors. Simply put, wildlife corridors provide protected areas

which link otherwise separated "islands" of habitat. This concept is of particular value in areas such as the Southland, where in many cases the last remnants of once-widespread habitat are surrounded by development. In San Diego County, the effects of this fragmentation of habitat have been documented in studies of canyons left undeveloped between developed areas. The number of species and individuals in canyons which are not linked to one another has been found to decline. The smaller the patch of canyon habitat, the more dramatic the decline.

The exact size of a piece of habitat, or the width and length of a corridor needed to preserve species diversity, is difficult to determine. While it can generally be stated that habitats and corridors function better as their size increases, the minimum size of a habitat must be determined on a case-by-case basis.

One example of how this concept can be accommodated within the general framework of land use regulations can be found in Lee County, Florida, which has codified the "buffer area" which must be provided if certain species are present. The Lee County protected species ordinance requires, for instance, that a buffer of 750 feet must be placed between development and a certain species of woodpecker; a buffer of ten feet is judged sufficient for some plant species.

According to wildlife biologists, buffer zones for species found in Southern California and San Bernardino County have not been accurately determined. In neighboring Orange County, standards have been established which define how wide natural areas along stream edges should be, based on the type of stream (the larger the stream, the wider the corridor). However, recent evidence from several developments in Orange County has suggested that Orange County's standards may not be stringent enough. Biologists are currently studying declines in wildlife activity in some Orange County wildlife corridors, seeking to draft improved regulations.

When establishing corridors, the most likely candidates are generally streams and rivers. Due to the presence of water, trees, and understory (bushes and grasses), animals are attracted to rivers and streams, and frequently use them to travel from one area to another. Because they are not suitable for development, river bottoms are also generally less disturbed than surrounding areas, making them valuable habitat resources in urbanizing areas such as the Valley region. An example is the Santa Ana River, which is one of the last--and largest--links between San Bernardino National Forest and northern Orange County and the Cleveland National Forest. On a local level, the many stream courses extending southward from the San Bernardino mountains (with the exception of those which have been channelized) also serve as routes for animals seeking to move through the urbanized areas of the Valley. Similarly, presently undeveloped areas throughout the County can be used by wildlife to travel safely from one area to another. It should be noted that some researchers have suggested

that corridors may have negative effects. Along with allowing animals to migrate, corridors can also make the transmission of diseases, fires, and other undesirable elements. However, it is generally accepted that the positive benefits of corridors outweigh negative effects, particularly in urbanized areas, where the primary concern is to prevent inbreeding and declines in species living in scattered habitat "islands."

Policy direction related to the establishment of corridors and the elimination of "islands" is contained in the countywide Natural Resource Preservation Policies. For additional related policies, refer to the Health and Safety section of this Open Space Element, which contains policies related to alteration of watercourses.

#### D. Habitat Banks

"Habitat banking," which is related to the issues of habitat and corridor protection, describes a system under which a public agency, such as the County, acquires title to a large area of natural habitat capable of supporting species diversity. This habitat area is initially purchased by the public agency, with funding ultimately derived from private developers, who are given the opportunity to purchase "shares" in the habitat bank to mitigate the loss of smaller areas of habitat within their developments.

As discussed above, the larger the habitat area, the greater the likelihood that desired natural values will be retained. By preserving large areas in favor of smaller, unconnected habitat, habitat banking achieves this objective.

#### E. Urban Open Spaces

County Open Space Goal C-37 proposes the establishment of natural open space areas in urban settings. The following discussion relates to that goal, and the need to provide urban open spaces.

While much attention has been focused on providing natural areas outside of cities for plants and animals (or to provide corridors which allow animals to pass through them), it should be noted that urban open space areas within cities can also have considerable value.

For instance, the simple step of allowing tall grasses and bushes to grow in a portion of a park which might otherwise have only mowed grass and trees can substantially increase the number of birds attracted to the park. If native grasses and plants are established to provide food for these birds, the increase can be more dramatic.

Incorporating wildlife into the urban setting can have many positive effects. Most persons prefer living in a community which contains wildlife

amenities, a preference reflected in the generally higher property values associated with higher levels of wildlife (all other value-determining factors being equal). Utilizing this type of approach also brings a "nature" experience closer to persons in urban settings who may not have the opportunity to travel to national forests or nature reserves.

Including urban open spaces in an overall open space system can also serve to improve the function of the corridor systems described above. By providing stopping places along a corridor, this type of urban open space can encourage animals to travel further along a corridor than would be the case if they had no other opportunity for rest or shelter.

There can be negative effects, however. From an aesthetic standpoint, the type of landscaping which is necessary to attract larger numbers of birds and other animals is different from the typical "park" appearance most persons expect at a city park. Native vegetation needs to be "unkempt"—it is the tangle of branches and twigs which makes it valuable for wildlife. From a crime prevention standpoint, areas of thick growth can make the job of law enforcement officers more difficult; in some areas, providing less cover for criminals may be judged by some to be more important than providing more cover for animals.

#### F. Major Natural Resources in San Bernardino County

The following discussions provide information on major natural resources in San Bernardino County, including areas or geologic features of special value or concern, specialized habitat areas, and threatened or endangered plant and animal species.

##### 1. Major Federal and State Open Space Resources

A variety of public and private agencies currently protect important natural areas in the County, either through ownership or regulatory control. Open space resources managed by various federal, state and private agencies in San Bernardino County are listed below. For the locations of these resources, refer to the Open Space Background Appendix. Information on the locations of these areas is shown in the U.S. Forest Service's San Bernardino National Forest Land and Resources Management Plan, the Bureau of Land Management's California Desert Conservation Area Plan, and in the Jurisdictional Control map in the County's GIS mapping system.

As discussed in this Element, a major source of potential conflicts between open space and private uses of land derives from the "checkerboard" pattern of ownership in many areas of the County, and in particular in portions of the BLM's California Desert Conservation Area and the National Forest. County Policy LU-10, in the Land Use section of the General Plan, specifically addresses this issue, and promotes cooperation between the

County and federal agencies to consolidate public ownership in so-called "checkerboard" areas. County Policy OR-25, listed in this section of the Open Space Element, also addresses this issue.

a. Bureau of Land Management

The Bureau of Land Management (BLM) has jurisdiction of vast areas of the County, in the Desert region. Included in the areas managed by the BLM are "Areas of Critical Environmental Concern (ACEC)," which have been identified as containing unique or limited natural features or habitat areas. A summary listing of these areas is provided in the Open Space Background Appendix. Other BLM special management areas are Unusual Plant Associations (UPA) and Wilderness Study Areas (WSA).

b. United States Forest Service (USFS)

The U.S. Forest Service manages the majority of the mountain regions within the County, which are for the most part located within the Angeles and San Bernardino National Forests. Areas within the National Forests which are managed for a variety of uses include: Cucamonga Wilderness, San Gorgonio Wilderness, Sheep Mountain Wilderness. Special permit areas for skiing, hang gliding, OHVs and camping. (Source: Recreation Element of the Forest Service Management Plan on file at Office of Planning). The sizes of wilderness areas maintained by the U.S. Forest Service are shown below.

TABLE E  
FOREST SERVICE WILDERNESS AREAS

Name	Acreage
San Gorgonio Wilderness	56,162
Cucamonga Wilderness	12,981
Sheep Mountain Wilderness	2,560

An important issue related to National Forest lands is the Forest Service's current policy to consolidate its landholding, divesting lands subject to urban pressures which do not, in its opinion meet the needs of the Service, in return for lands elsewhere which provide superior habitat or recreational values. In the San Bernardino National Forest, the Forest Service has recently transferred several hundred acres of forest land to private ownership in return for public ownership of larger areas of land elsewhere.

In response to these transfers, and other planned transfers, the "Save Our Forests Association" has been established in the mountain communities to discourage the further transfer of National Forest lands to private

ownership. Of specific concern to this group are several parcels in the Twin Peaks and Valley of Enchantment areas, totaling more than 600 acres. County Policy in the Mountain Region section of the General Plan specifically addresses this issue, and supports cooperation with the Forest Service to retain these lands as permanent, public open space.

c. California Department of Fish and Game

The California Department of Fish and Game maintains the fish and game preserves listed below within San Bernardino County.

TABLE F  
STATE FISH AND GAME DEPARTMENT PRESERVES

Name	Acreage
Mojave Fish Hatchery	10
Camp Cady Wildlife Area	1,223
Baldwin Lake Ecological Preserve	125
King Clone Creosote Ring	40

d. California Department of Parks and Recreation

The California Department of Parks and Recreation manages a number of public parks within the County, including: Chino Hills State Park (9,418 acres existing, 4,082 acres proposed addition), Providence Mountain State Park (5,890 acres), Silverwood Lake State Recreation area (2,400 acres), Seccombe Lake (62 acres).

e. University of California Natural Reserve System

The University of California maintains several nature reserves in San Bernardino County, as shown in the Table G.

TABLE G  
UNIVERSITY OF CALIFORNIA NATURE RESERVES

Name	Acreage
Etiwanda Wash	176
Burns Pinon Ridge	265
Granite Mountains	2,119 (UC)
Sacramento Mountains	7,311
	(6,720 - BLM, 591 - UC)

Information on the locations of these reserves is referenced in the Open Space Background Appendix.

f. National Monuments

Portions of three National Monuments are located within the County: Death Valley National Monument, Joshua Tree National Monument (559,960 acres), Rainbow Basin National Landmark.

Sources of information on the locations of national monuments are referenced in the Open Space Background Appendix.

2. Nature Conservancy Preserves

The Nature Conservancy, a private non-profit organization, maintains a number of open space preserves, listed below, in various portions of the County.

Sources of information on Nature Conservancy Preserves are referenced in the Open Space Background Appendix.

TABLE H  
NATURE CONSERVANCY PRESERVES

Name	Acreage
Baldwin Lake Preserve	450
Big Morongo Canyon Preserve	145
Castle Glen Bald Eagle Sanctuary	200
Sugarloaf Biota Bank	.10

3. Specialized Habitats on Private Lands

In addition to areas protected by public agencies or private conservancies, specialized habitats also occur on private lands throughout the County. These areas are important for the preservation of natural resources. Because of continuing pressure from urbanization, these areas are generally declining in numbers and size. A listing of major areas of habitat known to occur on private lands is shown below. Sources of information on these habitats are referenced in the Open Space Background Appendix.

TABLE I  
IMPORTANT HABITAT ON PRIVATE LANDS

<u>Specialized Habitat</u>	<u>Location</u>
Alkali Wet Meadow	Bear Valley/Baldwin Lake
Pebble Plains	Bear Valley/Baldwin Lake
Limestone Substrate	Bear Valley/Baldwin Lake
Walnut Woodland	Chino Hills/Tonner Canyon
Joshua Tree Woodland	Desert regions Countywide
Perennial Springs	Limited distribution Countywide
Riparian Woodlands	Restricted to areas immediately adjacent to stream and river courses Countywide

To address the issue of specialized habitat occurring on private lands, this Open Space Element, as well as other elements in the General Plan, contains a variety of policies which address the need to regulate private activities which could adversely affect open space resources of all types. Specific policies dealing with resources limited to specific regions are also contained in this Open Space Element.

#### 4. Other Natural Resources Areas of Biotic Significance

The following areas have been identified by a variety of agencies as being of special significance for biotic resources. Where appropriate, a critical natural resource associated with each area is noted. This list reflects identified resources; others may also exist, but have not been specifically identified.

TABLE J  
AREAS OF BIOTIC SIGNIFICANCE  
(PARTIAL LISTING)\*

- Cajon Creek
- San Bernardino and Little San Bernardino Mountains
- Amboy Crater
- Old Woman Mountains (Habitat for bighorn sheep and puma; contains dry lakes and sand dunes)
- Turtle Mountains
- Whipple Mountains
- Piute Springs (Habitat for special plants & birds)
- Lanfair Valley (Significant stands of joshua trees)
- Providence-Woods Mountains

TABLE J (Cont'd)  
AREAS OF BIOTIC SIGNIFICANCE  
(PARTIAL LISTING) \*

- Wildhorse Mesa (Habitat area for bighorn sheep and deer)
- Providence corridor (Special plant & animal association, habitat for creosote bushes and pinon junipers)
- Cima Dome (Halloran summit, significant stands of joshua trees)
- Lava beds (Specialized biotic habitat on basaltic rock)
- Devils Playground (Habitat for special sand-adapted species)
- Mojave River (Important desert riparian habitat--only major flowing river in the area)
- Amargosa River (Habitat for special plants and animals)
- Pisgah Crater (Specialized biotic habitat on basaltic rock)
- Ord & Roman Mountains (Habitat for bighorn sheep, chukar, and quail)

\* This is specifically not intended to be a listing of all areas worthy of preservation for natural resource values, but only to highlight some large, significant, and identifiable areas.

Sources of information on areas of biotic significance are referenced in the Open Space Background Appendix.

This Open Space Element, as well as other sections of the General Plan noted in this Element, contains a variety of countywide and region-specific policies dealing with the natural resource issues present in these areas.

#### 5. Hot Springs

Hot Springs, which are caused when subsurface water is heated by geothermal activity, are located in several areas of the County, and occur in scattered locations in the Valley, Mountain, and Desert regions. Hot springs are an open space resource which is valuable in part because this type of spring is uncommon, and in part because these springs often support special or unique plant and animal species.

Sources of information on the locations of hot springs in San Bernardino County are referenced in the Open Space Background Appendix. County Policy OR-34 deals specifically with the preservation of existing hot springs.

## 6. Mountainous Terrain

Mountainous terrain is an important open space resource for several reasons: mountains in San Bernardino County are a scenic resource, an important habitat area for wildlife, and represent an area in which substantial development is not likely to take place (making these areas candidates for long-term open space preservation).

Mountainous terrain (which is not synonymous with the "Mountain region," which consists primarily of the San Bernardino mountains) is found throughout the County. Several important mountain ranges, including the New York, Bullion, Bristol, and Cady mountains, are located in the Desert region, where their unique habitats often support special plants and animals.

Sources of information on the location of mountainous terrain are referenced in the Open Space Background Appendix. Specific policies related to natural resources in mountain areas are contained in this section. For other policies which relate to issues in Mountain areas, please refer also to the Scenic Resources section of this Open Space Element.

## 7. Sand Dunes

San dunes are located primarily in the Desert region of the County, most notably in the Devil's Playground area and east of the Calumet mountains. Dunes historically also occurred in the Valley region in and around the City of Colton, although only scattered remnants of these dunes have escaped urbanization.

Sand dunes are an open space resource for several uses. Dunes are a natural resource, providing habitat for desert-dwelling and other creatures, and serve as a scenic resource. In some areas, dunes are also used for recreational purposes, primarily by off-highway vehicle (OHV) users. (Note: Not all uses can be achieved simultaneously. See information on multiple use opportunities.)

For a listing of sources of information on the location of sand dunes in San Bernardino County, refer to the Open Space Background Appendix. For policy direction specifically related to sand dunes, see Policy OR-36 and policies in the Desert Region section of the General Plan.

## 8. Lava Flows

Lava flows, which are found in the Desert region, are protected as an open space resource due to their limited distribution and the unique character of these areas. Several large lava flows exist in

the desert south of the Cady mountains and east of the city of Baker.

Information sources for the locations of lava flows are referenced in the Open Space Background Appendix. Policy OR-37.a specifically addresses the issue of lava flows.

#### 9. Cinder Cones

Cinder cones, the remnants of ancient volcanoes, are found in the Desert region, and are protected as an open space resource due to their limited distribution and their unique character. In the County, cinder cones are generally associated with lava flows, which are described above.

Information sources for the locations of cinder cones are referenced in the Open Space Background Appendix. For specific policy direction related to cinder cones, see Policy OR-37.b.

#### 10. Dry Lakes/Playas

Dry lakes and playas are located in many areas in the Desert region, generally in areas far removed from urbanization. Examples of large dry lakes include Soda Dry Lake, south of Baker, Searles Dry Lake, in the northwestern corner of the County, and Bristol Dry Lake, in the south central portion of the County. More than 40 major dry lakes are found in the Desert area. No dry lakes are located in the Valley or Mountain regions.

Dry lakes and playas are noted as an open space resource due to the unique character of these areas, and due to the unsuitability of some dry lake or playa soils for development, which indicates that these areas should remain as open land. Dry lakes and playas in some areas provide a striking scenic resource, but have also been used for recreational purposes, chiefly by OHV users. (Note: Not all uses can be achieved simultaneously. See information on multiple use potential for further information.)

Information on the location of dry lakes is referenced in the Open Space Background Appendix. For specific policy direction related to dry lakes and playas, see Policy OR-37.c.

#### 11. Fragile Soils

Fragile soils are noted as an open space resource due to the general unsuitability of these areas for development purposes, and due to the limited extent of these areas, which in many cases support plant and animals species adapted to these conditions (as in the pebble plains in the Mountain region). Fragile soils are found

throughout the Desert region, and in the portion of the County south of the I-215 and I-10 freeways.

Sources of information on fragile soils are referenced in the Open Space Background Appendix. For specific policy direction related to this issue, see OR-18.e. Policies in other elements of the General Plan may also apply.

## 12. High Erosion Hazard Soils

Areas with soils subject to high levels of erosion are noted as a potential open space resource due to the general unsuitability of these areas for development purposes, which indicates that open space uses may be more appropriate. These soils are found throughout the Desert region, and in many areas in the Mountain and Valley regions.

Information sources for high erosion hazard soils are referenced in the Open Space Background Appendix. For specific policy direction related to this issue, see Policy OR-18.e. Other policies may also apply.

## 13. Perennial and Intermittent ("Blue-Line") Streams

Perennial and intermittent streams of all sizes are an important open space resource in San Bernardino County, providing riparian (streamside) habitat and wildlife dispersion areas, serving as scenic resources, and providing natural channels for storm flows. Since San Bernardino County receives relatively little annual rainfall, these streams—particularly those which flow year-round—are of special importance to wildlife, which depends on reliable sources of water.

In the County, streams are primarily associated with drainage from the San Bernardino mountains, although creeks and small watersheds can be found in many areas. Major drainages and flood plains within the County include the Lytle Creek and Cajon Wash, the Santa Ana River, Mill Creek, and City Creek in the Valley region. The major desert features are the Mojave and Colorado Rivers (See Section II-C-4, Water).

Sources of information on the location of blue-line streams are referenced in the Open Space Background Appendix. This section of the Open Space Element contains several policies related to preservation of natural watercourses. For further policy direction, refer to the Health and Safety section of this Element, which contains policies related to the alteration of natural stream courses.

#### 14. Groundwater Recharge Areas

Groundwater recharge areas, in which rainwater can percolate into subsurface groundwater basins, are located throughout the County. These areas include both natural open space areas and manmade facilities. Examples of manmade facilities include the spreading grounds along the major flood control facilities in the Valley region. Since they rely on open land for their function, groundwater recharge areas (both natural and manmade) are included in this Element as an open space resource.

For information on the location of surface groundwater recharge areas, refer to the Open Space Background Appendix. Specific policy direction favoring the retention of groundwater recharge areas as open space is contained in Policy OR-66 in Section 9 of this Open Space Element.

#### 15. Lakes and Reservoirs

Lakes and reservoirs are of special importance in San Bernardino County due to their scarcity, and for their ability to provide a variety of open space uses, including recreation, natural habitat, water storage, and scenic beauty. (Note: Not all uses may be achieved simultaneously. See information on multiple use potential for further information.)

Many of the County's lakes, including Big Bear Lake, Lake Arrowhead, Lake Gregory, Green Valley Lake, and Silverwood Lake, are manmade, and were established within this century.

Naturally occurring bodies of water in the County include Baldwin Lake, Erwin Lake, Deadman Lake, Jenks Lake, Harper Lake, numerous desert dry lakes and the shoreline along the west bank of the Colorado River.

The use of these features is controlled by land use designations and other development strategies. Major drainages and flood plains are the last component of water resources within the County. These include the Lytle Creek and Cajon Wash, the Santa Ana River, Mill Creek, and City Creek in the Valley portions. The major desert features are the Mojave and Colorado Rivers (See Section II-C-4, Water).

Sources on information on the locations and shorelines of lakes are referenced in the Open Space Background Appendix. This section of the Open Space Element contains a number of policies which support the retention of lakes as open space, and the use of these areas for natural habitat, recreation, and other appropriate uses.

## 16. Wetlands

Wetlands have in recent years been recognized as an important open space resource, providing important habitat areas for plants and animals, including migratory birds which live elsewhere but rely on local wetlands as stopover points. In San Bernardino County, as elsewhere in the United States, however, the original supply of wetland areas has been seriously diminished by decades of "swamp draining" and similar practices which resulted from a need to provide land and a mistaken notion that wetlands were a nuisance to be eliminated.

In San Bernardino County, the stock of wetlands is especially low because of the relative scarcity of perennial streams or springs. Those wetland areas which remain are therefor especially important.

A discussion of information sources for the locations of wetlands is contained in the Open Space Background Appendix. Policy OR-24.b, in this section, specifically addresses the issue of wetland protection. In addition, various other policies in this and the Health and Safety section of the Open Space Element address the issue of wetland and stream modification.

## 17. Limited Habitat Types: Chaparral, Conifer Forest, Woodland, Riparian Areas

Many plant communities of limited dispersion are located throughout the County. Because they represent habitat which is in some cases unique and in all cases limited in its extent, these areas represent an important natural open space resource. Chaparral is found throughout the lower elevations of the Mountain region, and extends into the northern portion of the Valley region. Coniferous and sub-alpine forests are limited to the upper elevations of the San Bernardino mountains. Desert woodland occurs along the northern flanks of the San Bernardino mountains. Riparian areas occur in many areas where perennial or intermittent water is available and natural habitat has not been completely removed.

Information sources to determine the locations of limited habitat types is referenced in the Open Space Background Appendix. This Open Space Element contains a variety of policies which support the retention of special habitat areas. In addition, this section of the Element references policies in the Biology section of the General Plan which address this issue.

### 18. Joshua Trees

Joshua trees are an important natural resource in the desert region of the County, where these plants are part of the natural desert ecosystem and a scenic resource. In general, it can be assumed that Joshua trees may be present on most sites in the desert and the desert/mountain interface. Joshua trees are found throughout the County, and are a particular issue in the vicinity of the "High Desert" communities, where the trees often face removal as part of the development process. In less urbanized areas, Joshua trees are sometimes "farmed" to extract natural substances from the plants.

Sources on information on Joshua tree stands are referenced in the Open Space Background Appendix.

Joshua trees are protected by County ordinance and State law.

### 19. Champion Lodgepole Pine

Information on the locations of areas containing Champion lodgepole pines are discussed in the Open Space Background Appendix.

This natural resource is protected by the BLM under the terms of the California Desert Conservation Area Plan in areas under federal jurisdiction. In areas where this resource occurs on private lands, exchange into public ownership, as supported in County Policy OR-25.

### 20. Large Mammals and Raptors: Beaver, Mountain Lion, Bear, Golden Eagle

A variety of large mammals inhabit natural areas in San Bernardino County. These mammals are generally similar in their need for large habitat areas in which to stake territory, seek food, and distance themselves from human activity. These mammals are primarily located in and near the Mountain region, and have ranges of varying size. The beaver is found only in scattered locations where sufficient water and forage are available.

Information sources on the locations of habitats for these species are referenced in the Open Space Background Appendix. A number of policies, both in this Open Space Element and elsewhere in the General Plan, support the preservation of habitat areas for these and other animals in San Bernardino County. Several wildlife corridors and policy zones, shown on the Resources Overlay, have been established specifically to protect habitat for these and other species; a description of all proposed corridors is contained in the Open Space Background Appendix.

## 21. Spotted Owl

The spotted owl, which inhabits "old growth" forests (those which have not been harvested for timber), has been designated in the Pacific Northwest as an endangered species by the federal government, extending the protection of the federal Endangered Species Act to this species. In San Bernardino County, habitat for the spotted owl is located primarily in undeveloped areas of the San Bernardino mountains where "old growth" forests remain.

Information sources on habitat for the spotted owl are referenced in the Open Space Background Appendix. Various policies in this Open Space Element, as well as the federal Endangered Species Act, protect the spotted owl.

## 22. Bighorn Sheep

Bighorn sheep are generally found in the Desert region in mountainous locations, where forage and water which support this species can be found. Bighorn sheep are found at upper elevations in mountain ranges throughout the County. Some major habitat areas for this species include the Cucamonga Wilderness, Mt. San Geronio, and several mountain ranges in the Desert region.

As an endangered species, the Bighorn sheep is protected both by federal law and County policy. Several areas shown on the Resources Overlay have been established to protect critical habitat areas for Bighorn sheep; other habitat areas for this species, although not specifically mapped, are also identified by County policy to be preserved.

Sources of information on bighorn sheep are referenced in the Open Space Background Appendix.

## 23. Stephens Kangaroo Rat

Although the majority of habitat areas for the Stephens kangaroo rat (SKR) are located in Riverside County, a small portion of this species' range is located in southern San Bernardino County east of Loma Linda.

Sources of information on habitat areas for the Stephens kangaroo rat are referenced in the Open Space Background Appendix.

As an endangered species, the Stephens kangaroo rat is protected both by federal law and County policy.

#### 24. Southern Rubber Boa

The southern rubber boa is a species of snake which inhabits forest floor habitat in a wide area of the San Bernardino Mountains, generally concentrated near and to the southeast of Lake Arrowhead.

The Open Space Background Appendix references sources of information on the location of known occurrences of this species and its habitat.

As an endangered species, the Southern rubber boa is protected both by federal law and County policy.

#### 25. Mojave Ground Squirrel

The Mojave ground squirrel is generally found in the Desert region, although its range includes portions of the northern flank of the San Bernardino mountains. The habitat range for this species includes the cities of Barstow and Victorville. As an endangered species, the Mojave ground squirrel is protected both by federal law and County policy.

Sources of information on this species are referenced in the Open Space Background Appendix.

#### 26. Yuma Clapper Rail

Habitat for the Yuma clapper rail is concentrated in the southeastern portion of the County along the Colorado River, generally extending south from the City of Needles to the Riverside County line.

As an endangered species, the Yuma clapper rail is protected both by federal law and County policy.

Sources of information on the Yuma clapper rail and its habitat are referenced in the Open Space Background Appendix.

#### 27. Sonora Lyre Snake

The habitat area for the Sonora lyre snake within San Bernardino County generally lies along the Colorado River, generally extending from the southernmost point of the County/Nevada border to the Riverside County line.

As an endangered species, the Sonora lyre snake is protected both by federal law and County policy.

Sources of information on this species and its habitat are referenced in the Open Space Background Appendix.

#### 28. Desert Tortoise

Habitat capable of supporting the desert tortoise is found throughout the Desert region, including areas near the urbanizing region of Barstow and Victorville. As a federally classified threatened species, and State classified endangered species, the Desert tortoise is protected by federal and State law as well as County policy.

Sources of information on the desert tortoise are referenced in the Open Space Background Appendix.

#### 29. Least Bells Vireo

The Least Bells vireo is a bird species which spends part of the year in California, where it generally nests in riparian areas which contain stands of willow trees. Declines in the number of individuals of this species in recent years have been blamed in part on a decrease in the area of riparian habitat in Southern California, as well as other factors. As an endangered species, the Least bells vireo is protected both by federal law and County policy.

Sources of information on the Least bells vireo and its habitat are referenced in the Open Space Background Appendix.

#### 30. Wild Burros

The descendants of burros released by 19th century prospectors, wild burros are found in the Desert region. Wild burros are subject to management decisions and practices of the Bureau of Land Management; the County does not maintain specific policies related to this species.

Sources of information on wild burros are referenced in the Open Space Background Appendix.

#### 31. Special Fish

San Bernardino County is home to a variety of threatened and endangered fish species, including several which exist only in the County. These species include the humpback sucker, bonytail, colorado squawfish, mojave chub, relict brine shrimp, relict crayfish, Tecopa pupfish, and the unarmored 3-spine stickleback (discussed earlier in this section). Several fish species which occur only in San Bernardino are found near the city of Baker; others are found in

scattered locations in the desert between Needles and the Riverside County line.

Sources of information on endangered fish and other animals are referenced in the Open Space Background Appendix.

As endangered species, these fish are protected by state and federal law and County policy.

### 32. U.S. Forest Service Management Zones

U.S. Forest Service Management Zones describe areas within the National Forest in which various management strategies are applied. Knowledge of these zones is useful as part of the development of an open space management strategy for private and publicly owned open space lands adjacent to areas managed by the Forest Service. For instance, open space lands adjacent to Forest Service lands managed for forage might be treated in a manner different from lands adjacent to Forest Service wilderness areas.

Information on Forest Service Management Zones are referenced in the Open Space Background Appendix.

### 33. SCAG Areas of Regional Significance and Concern

As part of its 1975 regional plan of open space areas, the Southern California Association of Governments identified a number of areas within San Bernardino County as critical open space areas.

These areas are listed in the Open Space Background Appendix, which also references information on the locations of these areas.

### 34. BLM's Multiple Use Classifications

#### G. General Plan Goals and Policies Related to Natural Resource Preservation

The following goals and policies, which are part of the Biology section of the County General Plan, are referenced here to illustrate the County's overall goals related to the preservation of natural resources. For details on these goals, the Biology section should be referenced.

Biology Goals: C-5, C-6, C-7, C-8, C-9

#### 1. General Plan Policies and Actions Related to Natural Resources

The following policies and actions, which are part of other

sections of the General Plan, are referenced to illustrate policies in addition to those listed in this section which should be applied to projects throughout the County.

Biology Policies/Actions: BI-1, BI-2, BI-3, BI-4.d, BI-5

Land Use Policies/Actions: LU-1.g, LU-10.c .d .e .f .g .h .i

Flood Control Policies/Actions: FL-8.a .b .c

#### H. Natural Resource Preservation Goals

The following are the County's goals related to resource preservation.

- C-34 Conserve as many of the County's natural resources as possible and ensure the protection and preservation of traditional regional park values for the benefit of future generations.
- C-35 Provide and preserve large open-space areas for both active and passive resource values.
- C-36 Include, protect, and manage areas having natural values of regional significance.
- C-37 Provide natural areas in urban settings to increase species diversity and provide wildlife viewing opportunities for persons within cities.
- C-38 Protect the alpine character and environment.
- C-39 Protect the forest watersheds.
- C-40 Minimize soil erosion through control of flooding and sedimentation.
- C-41 Throughout the County, protect natural slopes and topography.

#### I. Natural Resource Preservation Policies/Actions

To address the need to preserve natural resources, the following Natural Resource Preservation Policies shall be applied:

- OR-15 Because the County desires to protect and preserve natural habitat, areas shown on the Resources Overlay as "Policy Zones" and "Wildlife Corridors" shall be targeted for ministerial and discretionary actions, including purchase of some lands, in support of preserving the natural features and habitat present.
- OR-16 Because unwanted entry by pedestrians, equestrians, bicycles, or motorized vehicles can harm the desirable attributes of some open

space areas, the following policies shall apply:

- a. Control access to lands used for open space purposes as appropriate to retain the desirable open space attributes of the land.
- b. Limit construction of roads into or across natural open space areas or areas which require separation from human activity to preserve their function and value.

OR-17 Because preservation of natural systems requires the establishment of habitat areas larger than can be provided within individual developments, and since many habitat areas are at risk of being lost to urban encroachment, the County shall seek to establish a publicly owned open space system, purchasing land or development rights, or transferring development rights or density, where necessary to prevent development of important open space areas.

OR-18 Because preservation of natural resources cannot be accomplished only through the use of publicly owned land, the County shall apply the following policies to development and construction proposals on private lands.

- a. Require that private lands which exhibit unique features, as identified on the Resource Overlay Map or discussed in this Open Space Element, shall maintain those features. Compensation by allowing the transfer of development rights will be the preferred mechanism for accomplishing this goal. "Unique features" may include significant topographic features, ridgelines, habitats for threatened and endangered species, and habitats of limited dispersion in the County.
- b. Encourage donation or exchange of lands with sensitive biota resources (including, but not limited to, areas shown on the Resources Overlay) to non-profit environmental organizations or responsible agencies (USFS, County, the Nature Conservancy, etc.).
- c. Promote common-interest Planned Developments requiring open space and allowing transfer of development rights.
- d. Apply the Resource Conservation Land Use District in area of public and private open space which by its location, access limitations, natural resources, terrain or scenic qualities is suited for low intensity use.
- e. Direct growth away from areas containing fragile or erosion-prone soils, especially those which support natural habitats.

- OR-19 Because preservation of large habitat areas can be more successful as a natural resource preservation strategy than preservation of smaller, scattered areas within individual developments, the County supports the concept of "habitat banking," and shall make this type of system available to developers.
- OR-20 Because preservation of threatened and endangered species requires the preservation of naturally occurring ecological systems containing plants and animals not considered threatened or endangered, the County shall include in its review of all development projects the total habitat value of a site, rather than simply the presence or absence of these species.
- OR-21 Because successful long-term preservation of habitats can only occur where species diversity can be maintained through continued migration of animals, the County shall seek to eliminate the creation of habitat "islands," which consist of habitat surrounded by developed areas or other impediments to animal movement. To accomplish this, the County shall seek to:
- a. Require that open space areas set aside within individual developments be contiguous to natural areas adjacent to the site, if possible. Isolated open space areas within development shall be specifically discouraged, but may be accepted if no adjacent open space areas are available.
  - b. Use open space corridors to link natural areas.
  - c. Re-establish important wildlife corridors which may have been damaged or destroyed.
  - d. Consider design, construction, and maintenance techniques in the County Flood Control District system where technically and economically feasible which allow the growth of habitat and the use of the flood control system by wildlife.
- OR-22 Because preservation of natural resources can in many cases be achieved by providing sufficient distance between natural and developed areas, the County shall ensure that roads and buildings have an appropriate setback from riparian corridors, except where this requirement would endanger public safety. These setbacks shall be based on an engineering inundation analysis and on the wildlife and plant communities within the corridor, and shall consist of at least the following:
- a. Provide a setback of at least 50 feet from the edge of the mean annual flow area for all intermittent washes esignated as "blue lines" on USGS quadrangle maps where riparian communities exist.

- b. Provide a setback of at least 100 feet from the edge of the mean flow area for all perennial creeks and streams designated as "blue lines" on USGS quad sheet maps.
- c. Provide a corridor extending to the ridgelines defining the watercourse, or of a size determined by a qualified biologist to be sufficient to maintain wildlife use for all larger riparian areas, such as large creeks and rivers.

These setbacks may be waived in the case of roadway crossings, roadways on levees adjacent to water courses, or in similar situations where physical separation is not possible or appropriate.

OR-23 Because a regular assessment of the effectiveness of providing setbacks from natural areas is necessary to ensure that these measures are achieving the goal of protecting natural areas, the County shall regularly review minimum riparian area setbacks to determine whether the distances established serve the purpose of preserving wildlife use and natural habitats. If necessary, recommended setbacks shall be revised.

OR-24 Because preservation of rare, threatened, or endangered species depends on the preservation of habitat which supports populations of these species, the County shall implement the following policies:

- a. Seek to protect and conserve rare or endangered flora and fauna with limited or specialized habitats as well as common habitats necessary to support these species.
- b. Allow no net loss of existing wetland areas. Retention of existing biologically functioning wetlands shall be preferred over their replacement with manufactured wetland areas. In cases where wetland areas are established to replace areas lost to development, replacement shall take place at a ratio of five acres of new wetland for each one which is lost.
- c. Require all County agencies, including Special Districts and the Transportation/Flood Control Department, to demonstrate that their projects meet the overall Biotic Resource and Open Space policies of the County prior to proceeding. Approval for projects which do not meet with these policies shall be made only when it can be demonstrated that no technically feasible alternative exists.
- d. Seek to provide protection and management to maintain habitat values where protection of natural areas and endangered species is not provided by another agency.

- e. Review land use designations to ensure that planned land uses provide adequate protection for natural areas in areas containing known or potential biotic resources or designated as open space zones, corridors, or active trail alignments on the Resources Overlay. This policy shall also apply to areas adjacent to zones, corridors, or active trail alignments.

OR-25 Because the development of private lands can adversely affect the management strategies of the federal agencies which administer public lands within San Bernardino County, the County shall apply the following policies:

- a. Support the transfer of private inholdings into public ownership through appropriate mechanisms to reduce "checkerboard" ownership.
- b. Review the planning documents of the public agency to determine the intensity of uses allowed when examining private land uses which are surrounded by public lands. The more restrictive policies shall be applied.
- c. Develop private inholdings within Wilderness Study Areas in the California Desert Conservation planning area only in compliance with the stipulations of the Federal Land Policy and Management Policies Act (FLPMA) until Congress takes action to designate specific wilderness areas.

Areas identified by the Bureau of Land Management as being of Critical Environmental Concern include:

- Trona Pinnacles
- Grimshaw Lake
- Amargosa River
- Salt Creek (Dumont)
- Clark Mountain
- New York Mountains
- Ft. Piute
- Fort Soda
- Afton Canyon
- Eriophyllum
- Harper Dry Lake
- Mojave Fishhook
- Upper Johnson
- Soggy Dry Lake
- Big Morongo Canyon
- Rainbow Basin Natural Area
- Cronese Lakes
- Redman Mountains

- Black Mountain Cultural Area
- Calico Early Man Site
- Denning Spring
- Juniper Flats
- Kingston Range

In addition, the Bureau of Land Management has also designated the East Mojave National Scenic Area as an area of special concern.

- OR-26 Because preservation of natural resources may require purchase of private lands, the County shall consider the use of funding for the regional open space/trails system for use in the consolidation of public landholding within the National Forest and California Desert Conservation Area where these purchases will further the implementation of the Open Space/Trails System and where no other source of funding exists to purchase or transfer development rights from these lands.
- OR-27 Because preservation of some natural resources requires the establishment of a buffer area between the resource and developed areas, the County shall review the Land Use Designations for unincorporated areas within ten (10) miles of any state or federally designated scenic area, national monument, or similar area, to ensure that sufficiently low development densities and building controls are applied to protect the visual and natural qualities of these areas.
- OR-28 Because preservation of natural resources is a goal of the County, the County shall support land use and landscape strategies and standards which protect wildlife habitats and important vegetation.
- OR-29 Because the preservation of natural resources can be achieved or assisted through the establishment of proper management practices, the County shall encourage the use of good conservation practices in the management of grading, replacement of ground cover, protection of soils, natural drainage, and the protection and replacement of indigenous trees.
- OR-30 Because loss of natural resources can be prevented only when sufficient information on the resource is available, the County shall apply the following actions and policies:
- a. Develop a Master Environmental Assessment listing open space resources and establish a method of monitoring their protection.
  - b. Permit development proposed within canyons with riparian or water-related corridors only after a site-specific investigation is conducted to define the extent and fragility of the natural

vegetation, and when it is found that the proposed development will not substantially damage the natural vegetation either directly or indirectly.

- OR-31 Because damage to natural resources can be prevented by discouraging inappropriate development, the County shall discourage single family residential development proposed within canyons with riparian corridors. In all areas with natural habitat values, the County shall encourage development to be clustered or otherwise adapted to protect riparian areas from damage.
- OR-32 Because the design of development projects and the implementation of landscaping within developments can have a significant effect on the County's goal of preserving natural resources, the County shall apply the following policies:
- a. Prohibit removal of mature vegetation found within riparian corridors unless done to reduce safety hazards and in a manner that will not damage the ecosystem of the corridor. Removal of vegetation shall be performed in accordance with Section 1600 of the State of California Fish and Game Code.
  - b. Require that landscaping materials in canyon areas be similar to adjoining or nearby natural areas and are native or drought-tolerant with fire retardant qualities.
  - c. Encourage project designs that provide visual link with the surrounding environment by incorporating creeks and areas adjacent to channels within the open space of projects and by landscaping to reflect the natural riparian character of the canyons.
  - d. Encourage use of the cluster development concept, large lot districts, and open space and drainage easements to protect stream beds, vegetation, soils and wildlife.
- OR-33 Because cooperation with private landowners and the development community can advance the goal of protecting natural resources, the County shall make available to developers/owners information on the general tax advantages of donating land to nonprofit organizations such as the Nature Conservancy and the marketing value of conservation easements, which may increase the value of adjacent land donations, etc.
- OR-34 Because hot springs are a natural resource of special value due to their limited extent, the County shall seek to protect all existing hot springs by placing these features in permanent open space areas.

- OR-35 Because the County has identified a goal of providing open spaces in urban areas, the County shall support the establishment of "urban open space areas" within urban areas, and shall seek to develop or retain these areas through cooperation with local cities. Where possible, these areas shall be located along or near regional trail routes.
- OR-36 Because sand dunes, particularly those in the vicinity of Slover Mountain, have special value as habitat and scenic resources, and because dunes can be damaged or destroyed by development, the County shall seek to retain these features as open space to provide habitat for species endemic to dunes.
- OR-37 Because the County contains open space values which are of local, regional, statewide, and national significance, the County shall apply the following policies.
- a. Seek to retain all existing lava flows in their existing condition as natural open space. Where lava flows are located on federal lands, the County shall encourage the Bureau of Land Management or other responsibility to preserve these features.
  - b. Seek to retain all existing cinder cones in their existing condition as natural open space. Where cinder cones are located on federal lands, the County shall encourage the Bureau of Land Management or other responsible agency to preserve these features.
  - c. Seek to retain all existing dry lakes and playas in the their existing condition as natural open space. Where dry lakes and playas are located on federal lands, the County shall encourage the Bureau of Land Management or other responsible agency to preserve these features.
- OR-38 Because preservation of natural resources will require the implementation of new plans and policies, the County shall implement the following actions:
- a. Establish habitat "land banks" as mitigation for loss of isolated resources.
  - b. Initiate the preparation of Multi-Species Habitat Conservation Plans for all endangered species within the County whose habitats are judged by the state Department of Fish and Game or the federal Fish and Wildlife Agency to be subject to encroachment and destruction by any type of development or resource extraction.

- c. Prepare a "Protected Species Mitigation Ordinance" specifying specific buffer distances and other considerations which shall apply to all public and private development activities with the potential to affect threatened or endangered species or habitat areas.
- d. Work with state and federal agencies to identify public lands available for acquisition or exchange.

In many areas, the County's agricultural base is increasingly threatened by the encroachment of urban uses. For instance, the large dairy preserve in the south Chino area, for which the County is noted, is adjacent to two large cities (Chino and Ontario) and, with the completion of the I-15 freeway, is now surrounded by major highways. Citrus farming, once widespread, is currently declining in the Valley region of the County, where groves are being closed and replaced with new housing.

There still remain large blocks of active viable citrus farms predominantly in the East Valley region. The Desert region also provides for a multiple of agricultural uses, principally along the Mojave River extending from Silverwood Lake to the Newberry Springs area. As noted in the Soils/Agriculture section of the General Plan, the establishment of new agricultural operations in the desert may face severe limitations in available water supply and quality.

#### 6. Commercial Fisheries

A commercial fishery, as defined by the State Department of Fish and Games, involves the taking of fish from the wild for profit. San Bernardino County (a relatively dry County) is not the home of any major commercial fishing operations which fit this definition. There are, however, several small fish farms in the County. These small farms raise exotic fish such as koi and species of rainbow trout, large mouth bass and, most commonly, channel catfish. They are sold to consumers for food or to stock private farm ponds. Basically, these "fish farms" are considered a form of specialty agriculture or aquaculture.

This Open Space Element does not contain policies related to commercial fisheries.

#### B. General Plan Goals Related to Managed Production of Resources

The following goals, which are contained in other chapters of the General Plan, are referenced here to highlight goals which County has adopted in support of open space planning.

Soils/Agriculture Goals: C-51, C-52

Minerals Goals: C-53

#### 1. General Plan Policies Related to Managed Production of Resources

The following policies, which are contained elsewhere in the General Plan, are referenced here to illustrate some policies in

support of the County's open space goals. This is not intended as a complete reference; for additional policy guidance, other sections of the General Plan should be consulted.

Soils/Agriculture Policies: SA-2.i, .p, .q

Land Use/Growth Management Policies: LU-1.a, .b, .d, .e, .f

Minerals Policies: MR-3.a, .b, .c, .d, MR-4.a, .b, .c, .e

### C. Managed Production of Resources Policies/Actions

The following are the Managed Production of Resources Policies of the County:

- OR-39 Because mineral extraction is essential to the economic well-being of the County and requirements of society, it should be encouraged where significant mineral deposits exist and when found to be compatible with adjacent uses.
- OR-40 Because mining uses can be effectively placed within flood control areas, and can serve as part of a maintenance strategy for debris basins and other flood control facilities, the County shall encourage mixed use between sand and gravel extraction and Flood Control District projects, except where mining would destroy desirable open space attributes.
- OR-41 Because closed mining operations have the potential to be used as permanent open space if proper planning and operations are carried out, open space uses shall be considered in surface mining reclamation plans-
- OR-42 Because soils are a limited resource, soils should be protected and restored by developing a plan of native plantings designed to promote the restoration of soil in present rocky flood plain areas. Artificial planting of vegetation in floodways may be discouraged, although re-establishment of plants through natural means may be allowed.
- OR-43 Because preservation of agricultural lands can be achieved through the application of appropriate land use regulations, the County shall apply the following policies:
- a. The County shall support the use Williamson Act Preserves and Contracts to preserve agricultural lands.
  - b. Designate those areas containing productive agricultural uses with a land use district permitting that use.

- c. In land use decisions, the County shall permit only those use types within agricultural areas that will contribute to the economic viability of the primary agriculture use while not detracting from or competing with it.
- d. The County shall seek to protect the supply of water for agriculture by restricting or excluding agricultural uses which have a high rate of water consumption in overdrafted areas.

OR-44 Because grazing lands are an important resource, and because grazing has the potential to damage resources present on some open space lands, the County shall apply the following policies:

- a. On open space lands maintained by the County, grazing may be considered as part of an overall management strategy where this use is consistent with the purpose of the open space lands.
- b. Through cooperation with the federal government, seek to limit grazing on public lands to those areas which can support this use without detracting from other open space values, and seek to prevent grazing on County-controlled lands where this use would detract from other open spaces uses within or adjacent to a grazed area.

SECTION 7. RECREATION

While modern society has created many types of recreation which can occur in an urban setting—or even within buildings—open areas in the outdoors remain an important location for many Americans seeking rest and relaxation. This type of open space can include areas such as the National Forests, where visitors seek recreation by hiking, camping, picnicking, and skiing; and areas where use of off-highway vehicles (OHVs) is permitted.

This section of the Open Space Element discusses open lands which are needed for recreation purposes (with the exception of trails, which are discussed in a separate section of this Element).

A. Major Recreation Resources in San Bernardino County

1. Regional Parks

The following County Regional Parks, which are described in detail in the Regional Parks Strategic Master Plan, 2010: Our Parks Future, are shown by location on the Resources Overlay. Specific information regarding the boundaries of regional parks is available from the Regional Parks Department.

Many other areas, including areas adjacent to regional parks, are discussed for potential acquisition in the Regional Parks Strategic Master Plan, which may be consulted for further information.

TABLE K  
COUNTY REGIONAL PARKS

<u>Park</u>	<u>County Region</u>
Prado	Valley (West)
Cucamonga-Guasti	Valley (West)
Glen-Helen	Valley/Mountain
Agua Mansa (future) <sup>a</sup>	Valley (East)
Yucaipa	Valley (East)
Citrus Heritage (future) <sup>a</sup>	Valley (East)
Lake Gregory	Mountain
Calico Ghost Town <sup>b</sup>	Desert
Mojave Narrows	Desert
Mojave River Forks	Desert
Big Morongo Wildlife Preserve	Desert
Moabi <sup>c</sup>	Desert

(See notes on next page)

- 
- a. These parks are planned, but not yet built. Agua Mansa Regional Park is proposed to be built on the site of the current Colton Landfill when that facility closes. Citrus Heritage Park is proposed to be constructed on land adjacent to the San Bernardino County Museum.
  - b. An updated master plan for this Regional Park is currently under way.
  - c. An updated master plan for this Regional Park is scheduled to be under way in 1990.

Specific policies related to regional parks are listed later in this section.

## 2. Community Parks

Community, municipal park, and/or neighborhood park facilities are provided by city park departments for the incorporated areas and by self-governed and board-governed park districts within the unincorporated portions of the County. These facilities typically include playgrounds, ballfields, and senior citizen centers. For the most part, new facilities have been provided within the city areas. However, the fact that new parks in unincorporated areas have not been realized is, in part, responsible for park over-utilization. In many instances in the County, the local park districts also cooperate with the school districts in conjunctive use of their facilities. However, when school and park facilities are combined by adjoining sites, each should be able to stand alone.

## 3. Districts and Service Areas with Park and Recreation Powers

Throughout the County, local recreation facilities, which provide recreational open space, are provided by independent and board-governed special districts. These districts typically collect an annual assessment on land within their boundaries, which is then used for the acquisition and operation of park facilities and recreation programs. Districts currently providing park and/or recreation facilities include:

TABLE L  
PARK AND RECREATION  
DISTRICTS

Board-Governed Districts<sup>a</sup>

CSA 18	(Cedarpines Park)
CSA 19	(Chino)
CSA 29	(Lucerne)
CSA 42	(Oro Grande)
CSA 48	(Carbon Canyon)
CSA 48A	(Sleepy Hollow)

Board-Governed Districts<sup>a</sup>

CSA 51	(Los Serranos)
CSA 56	(Wrightwood)
CSA 56 F-1	(Pinon Hills)
CSA 63	(Yucaipa)
CSA 70 CR	(Crafton Hills)
CSA 70 P-2	(Muscoy)
CSA 70 P-4	(Phelan)
CSA 70 P-5	(El Mirage)
CSA 82	(Searles Valley)
CSA 82 SV-3	(Trona)
Barstow Recreation and Park	
Big Bear Valley Recreation and Park	
Bloomington Park and Recreation	
Joshua Tree Park and Recreation	
Twentynine Palms Park and Recreation	
Yucca Valley Park and Recreation	

Independent Districts<sup>b</sup>

Apple Valley Park and Recreation  
Baker CSD  
Barstow Heights CSD  
Big River CSD  
Daggett CSD  
Hesperia Recreation and Park  
Morongo Valley CSD  
Newberry Springs CSD  
Parker Dam Park and Recreation  
Rim of the World Recreation and Park  
Victorville Park and Recreation  
Yermo CSD

(See notes on next page)

- a. For "Board-Governed" Districts, the County Board of Supervisors serves as the Park District Board of Directors.
- b. "Independent" Districts operate separate from County government, and have Boards of Directors which are elected by voters within each District.

#### 4. San Bernardino County Park Inventory

The inventory of park facilities in Table M, below, includes both County and locally operated park facilities. Table N, following, provides an inventory of regional park land.

TABLE M  
PARKLAND INVENTORY

	<u>Number of Parks</u>	<u>Existing Acreage</u>	<u>Proposed Acreage</u>
East Valley(RSA 29)	79	989.63	1,222.46
West Valley(RSA 28)	108	860.20	742.9
Mountains (RSA 30	20	65.46	20.0
No. Desert (RSA 31,	47	342.65	219.35
32A & 32B)			
So. Desert (RSA 33 & 34)	<u>33</u>	<u>442.77</u>	<u>58.5</u>
COUNTYWIDE TOTAL	287	2,700.71	2,263.21
City Parks	206	1,753.45	1,029.86
County Service			
Area Parks	24	260.88	7.0
Community Service			
District Parks	8	66.85	6.35
Park & Recreation			
Districts	49	619.53	220.0
TOTAL PARKS*	287	2,700.71	2,263.21
County Regional Parks	<u>10</u>	<u>7,779.0</u>	<u>n/a</u>
TOTAL	297	9,902.71	1,263.21
State Parks*	4	17,770.0	4,082.0
National Parks*	2	n/a	n/a
Univ. of Calif.			
Natural Reserves*	4	9,951	-176
			(loss anticipated)

\*State and National Parks and Reserves are not included in the County total.

TABLE N  
EXISTING REGIONAL PARKS AND ACREAGE  
BY REGIONAL STATISTICAL AREA (1989)

REGIONAL STATISTICAL AREAS	1988 POPULATION (Est.)	REGIONAL AND LOCAL PARKS		EXISTING PARKS PROVIDED BY CITIES, CSA, CSD AND SELF-GOVERNMENT		EXISTING REGIONAL PARKS - COUNTY		
		Acres per 1000 Pop.	# of Parks	# of Acres	Acres per 1000 Pop.	# of Parks	# of Acres	Acres per 1000 Pop.
RSA 28 (W. Valley)	504,700	6.48	108	860.20	1.70	2	2,350	4.66
RSA 29 (E. Valley)	453,100	6.35	79	898.63	2.18	3	1,725	3.81
RSA 30 (Mountains)	53,500	4.03	20	65.46	1.22	1	150	2.80
RSA 31,32* (N. Desert)	228,700**	19.29**	47	342.65	3.43	3	2,347	15.54
RSA 33,34 (S. Desert)			33	442.77	n/a	2	1,207	n/a
TOTAL	1,240,000	8.74	287	2,100.71	2.18	11	7,779	6.27

\* 1988 Population estimates not available for RSA 32 and 34

\*\* Combined totals of RSA 31 and 32

## 5. Major Existing Trails

Existing and planned trails within the County are discussed in the Trails section of this Open Space Element. Policies and standards specifically related to trail development are presented in that section.

## 6. Bike Routes

Bike routes are related to open space since they can provide access to open areas. This Open Space Element does not deal specifically with bike routes, although most of the regional trails proposed in this Element will provide for bicycle use. Bike routes planned by the County or other local agencies should provide connections with these regional trails wherever possible.

## 7. OHV Areas

Increased interest in off-highway vehicle activities suggests a need for an OHV policy and designation of appropriate areas. Presently, uncontrolled use of available open space lands results in conflicts with existing uses, trespass, and destruction to private property, and, in some instances, natural habitat.

Information on Off-Highway Vehicle (OHV) areas in the desert under the jurisdiction of the BLM is referenced in the Open Space Background Appendix.

Specific policies dealing with OHV use are contained in Recreational Open Space Policy OR-47.

## 8. Points of Public Access to Lakeshores, Rivers, and Streams

The Santa Ana, Mojave and Colorado Rivers are defined by the U.S. Army Corps of Engineers as "navigable" rivers. In actuality, the Santa Ana and Mojave Rivers are ephemeral rivers, flowing only intermittently above the ground. The Lower Colorado River is a highly valued water-based recreation source for people in southwestern Nevada, western Arizona and southern California. Recreational opportunities include fishing, camping, swimming, boating and water skiing. The Bureau of Land Management (BLM) has jurisdiction on much of the land along the river, not on the river itself; however, recreational activities tie the land and water into one interdependent network. One major regional recreation area is Moabi Regional Park, 11 miles southeast of Needles. Covering 1.027 acres, it is operated by County Regional Parks.

Defining the exact locations of public access to waterways is difficult to map, given the ownership pattern which generally exists adjacent to the County's lakes, rivers, and streams. Specifically, many

lakes in the County are man-made and privately owned, and therefore open to public access only at controlled locations. A summary inventory of major public access opportunities to bodies of water is provided in Table O.

TABLE O  
SUMMARY INVENTORY OF PUBLIC ACCESS  
TO BODIES OF WATER

<u>Resources</u>	<u>Access Summary</u>
Baldwin Lake	Some public access to the shore of this lake.
Big Bear Lake	Public access to lakeshore at many locations.
Colorado River	Public access to river at many locations, including Moabi Regional Park.
Cucamonga Guasti Regional Park	County Regional Park with public access to stocked fishing and boating lake.
Glen Helen Regional Park	County Regional Park with public access to lake for fishing and boating.
Green Valley Lake	This privately owned lake is open to the public for a fee for fishing.
Jenks Lake	Public access to this lake in the National Forest.
Lake Arrowhead	Limited public access to beach at this private lake.
Lake Gregory	County Regional Park with public beach and boat rentals.
Lake Silverwood	State Recreation Area provides public access to this water storage reservoir for boating, swimming, and fishing.
Lost Lake	
Moabi Regional Park	County Regional Park with public access to Colorado River.
Mojave Narrows Regional Park	County Regional Park with public access to Mojave River and two fishing lakes
Mojave River Forks Regional Park	County Regional Park with public access to Mojave River.

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TABLE O (Cont'd)  
SUMMARY INVENTORY OF PUBLIC ACCESS  
TO BODIES OF WATER

<u>Resources</u>	<u>Access Summary</u>
National Forest	Extensive public access to perennial and seasonal streams and rivers is provided throughout the National Forest. Much access is limited by terrain to hikers, mountain bicyclists, and other off-highway users.
Prado Regional Park	County Regional Park with 58-acre fishing and boating lake.
Santa Ana River	Extensive public access to portion of river within National Forest. Outside national forest, access is generally restricted by private and public owners.
Yucaipa Regional Park	County Regional Park with public access to lake for fishing and boating.

Information on the locations of these features is referenced in the Open Space Background Appendix.

Policy direction related to improving public access to rivers and other waterways is contained in Recreational Open Space Policy OR-48.

#### 9. Ski Areas

Ski areas represent a significant winter recreation opportunity in San Bernardino County. According to the California Department of Parks and Recreation, the number of hours spent skiing in the state region which includes San Bernardino County is projected to increase from approximately 4.9-million in 1990 to 5.7-million in the year 2000.

Ski areas within the County are generally located on land under the control of the U.S. Forest Service. Major ski areas in the County include Snow Valley, near Running Springs, and Snow Summit and Bear Mountain, both near Big Bear. Mapping of ski areas in the national forest is referenced in the Open Space Background Appendix.

#### 10. Hang Gliding Areas (USFS Special Use Permit)

Hang gliding areas have been provided by the U.S. Forest Service in the San Bernardino National Forest through its special use permit process. A major hang gliding takeoff area is located in the San Bernardino mountains near the community of Crestline.

Information on hang gliding areas in the national forest is referenced in the Open Space Background Appendix.

#### B. General Plan Goals Related to Recreation

The following goal, which is contained in another section of the General Plan, is referenced here to illustrate County policy related to other issues which supports recreational uses.

Transportation/Circulation Goal: D-23

#### C. Recreation Goals

The following are the County of San Bernardino's goals related to recreational open space.

C-42 Establish and implement policies and management strategies that will effectively conserve and utilize park resources.

C-43 Minimize conflicts between regional parks and surrounding land uses.

C-44 Establish theme programs that relate to cultural and natural resources in regional parks.

C-45 Develop and maintain a well-balanced regional parks system that will provide for the regional recreation needs of the public.

C-46 Develop scenic, cultural resource, and historic sites of regional value for public enjoyment.

C-47 Establish and maintain special regional facilities such as regional parks, historical facilities, nature preserves, off-highway vehicle areas and recreational airports.

C-48 Provide water-oriented regional recreation facilities.

C-49 Provide camping and picnic facilities where appropriate within County regional parks.

C-50 Develop and maintain areas for organized off-highway use where environmental damage can be minimized and land use conflicts avoided.

- 
- C-51 Protect and maintain regional resources of unique character and value where protection cannot be achieved through other agencies.
- C-52 Establish and acquire a standard per capita acreage of local recreational parks.
- C-53 Provide for common open-space and recreation uses whenever possible.
- C-54 Provide public access to all water bodies and water courses.

D. Recreation Policies/Actions

The following are the Recreational Open Space Policies and Actions of the County.

- OR-45 Because the County has fallen behind in the provision of Regional Park lands, and because a Strategic Master Plan has been approved, and because new development creates a demand for additional regional park facilities, the County shall:
- a. Implement policies contained in the Regional Parks Strategic Master Plan, 2010: Our Parks Future.
  - b. Require new development within the County to provide regional recreation facilities via development fees.
  - c. Strive to achieve a standard of 14 1/2 acres of undeveloped lands and/or trails per thousand population and, 2 1/2 acres of developed regional park land per thousand population. "Undeveloped lands" may include areas established to buffer regional parks from encroachment by incompatible uses. Note: This standard of 14 1/2 acres of "undeveloped lands" does not establish an overall standard for provision of publicly owned open space lands. The need for lands in addition to those meeting the 14 1/2 acre standard is based on acreage required for resource protection, health and safety, and other concerns, and is not related to population.
  - d. During the land development process, continually work with the Regional Parks Department to identify future sites suitable for siting new regional park land as part of the ongoing Capital Improvement Program and amend the General Plan accordingly once specific sites have been chosen.
  - e. When specific projects are reviewed which exhibit natural features worthy of regional park land status, require the dedication of these lands when recommended by the Regional Parks Department and approved by the Board of Supervisors.

- f. Assure that the variety of recreational experiences at Regional Park sites meets the needs of the region.
- g. Seek the conjunctive use of public lands for regional park experiences. Flood control lands are one example, as are lands that have been deemed unsuitable for habitable structures.
- h. Utilize public funding mechanisms wherever possible to protect and acquire regional park lands.
- i. Cooperate with the County Transportation/Flood Control Department in establishing a viable regional trail system within the County.
- j. Minimize the disposal of County lands until it is assured that these lands would not serve to enhance the Regional Parks Department goals for park and trail systems and other open space purposes. Utilize small parcels adjacent to flood control facilities for equestrian, pedestrian and biking staging areas. The County Transportation/Flood Control Department shall contact the Regional Parks Department or other County open space agency prior to disposing of any surplus lands.
- k. Coordinate with the federal and state agencies regarding opportunities for leasing public lands for regional park, open space, and trail purposes.

OR-46

Because the provision of parks, open space lands, and trails directly contributes to the overall balance of land uses and quality of life, and because the amount of park land, open space, and trails available can be directly correlated to new development, the County will assure that these open space and recreation areas are both preserved and provided. To achieve this, the following policies shall be implemented:

- a. New residential development shall be responsible for providing local park and recreation facilities at a rate of not less than 3 acres per thousand population. This could include the dedication of lands, payment of fees, or both.
- b. Implement the Quimby Act (Gov. Code Section 66477) through the subdivision process in providing for local park opportunities (both passive and active).
- c. Areas in new development proposals which are not suitable for habitable structures shall be offered for recreation, other open space uses, trails, and scenic uses. Retention of open space lands shall be considered with modifications to a site to

increase its buildable area. Potential measures used to set aside open space lands of all types include dedication to the County or an open space agency, dedication or purchase of conservation easements, and transfer of development rights.

- d. Recreational opportunities provided by new development shall not encourage or induce trespass on adjacent private lands.
- e. In addition to parkland to meet the 3 acres per 1,000 local park standard, large-scale housing projects with 100 or more units shall provide onsite recreational facilities, including pools, tennis courts, and turfed play areas and totlots.
- f. Classify local parks in three (3) categories: Local, Neighborhood and Community Parks.
- g. Establish size and location standards as follows:
  - i) Local Park: A small walk-in park, up to five acres, serving a concentrated or limited population, particularly children, within a quarter mile radius.
  - ii) Neighborhood Park: A walk-in park, up to 10 acres, with a service radius of a half mile. Serves a neighborhood, and provides a passive recreation location for all age groups.
  - iii) Community Park: A walk-in, drive to park, up to 40 acres, which includes areas for intense recreational facilities and serves a combination of neighborhoods within a 1-2 mile radius.
- h. Require review by the Office of Planning for the establishment of local parks.

OR-47 Because Off-Highway Vehicle (OHV) use must be regulated to allow recreational enjoyment while protecting sensitive natural resources, the County shall apply the following policies:

- a. Prohibit the use of off-highway vehicles for recreational purposes on land other than one's own except in a designated area or on existing roads where such use is permitted, and subject to approval of a Conditional Use Permit/Site Approval.
- b. Provide sufficient guarantees to assure all permit stipulations are adhered to for all sanctioned OHV events; temporary events shall receive a special events permit from the Department of Environmental Health Services.

- c. Work with Federal agencies in implementing remedial measures to block OHV usage where it is deemed inappropriate and conflicts with open space uses as identified on the Resource Overlay.
- d. Require all new development to install gates, fences, or other suitable OHV deterrents when deemed necessary.
- e. Allow no OHV use in areas which provide habitat (including habitat which is not itself threatened) which supports threatened or endangered plant or animal species.

OR-48      Because the County seeks to improve the ability of the public to enjoy water-related recreation, the County shall seek to improve public access to rivers, streams, creeks, lakes, and other bodies of water.

OR-49      Because public access to water for recreational uses is important to the County, easements and dedications allowed in the Subdivision Map Act, to acquire access to lakes, streams, public lands and other locally and regionally significant natural features shall be required for all new development.

## SECTION 8. SCENIC RESOURCES

Scenic areas in San Bernardino County contain vistas that rival many found elsewhere in the state and the nation. Rapid population expansion and decreased gasoline prices in the past decade have extended the range of the general public for weekend and vacation travel opportunities. This, coupled with a lack of public railways which conveniently interconnect the various populated lands, has resulted in current levels of private vehicle use being among the highest ever. The scenic quality of the routes which cross the County can be deteriorated by advertising and urban uses along these corridors. The state highway system is managed by Caltrans, which has designed several routes that qualify as scenic; others are potentially available.

Equally important in the discussion of open spaces are the routes available for the linking of various communities and also for the provision of access to open space areas which provide recreation.

San Bernardino County is crisscrossed by an extensive network of transportation corridors. All but the most remote areas are generally accessible by passenger vehicles. As urban areas grow and as the number of vehicles crossing the County spurs the demand for roadway service and advertising, resulting land uses are often incompatible with the preservation of open space.

### A. Determination of Scenic Value

San Bernardino County contains a wealth of scenic resources, which have in many cases been recognized by local jurisdictions, the County, or state and federal agencies as worthy of special protection to preserve their aesthetic value. The County's vast undeveloped areas, for instance, provide a significant scenic resource in the undisturbed vistas they offer as a contrast to the more developed urban areas. Whatever the scenic resource, all help to improve the quality of life by providing pleasant surroundings in which to live, work, and recreate.

In general, a feature or vista can be considered scenic if it:

- 1) Provides a vista of undisturbed natural areas.
- 2) Includes a unique or unusual feature which comprises an important or dominant portion of the viewshed (the area within the field of view of the observer).
- 3) Offers a distant vista which provides relief from less attractive views of nearby features (such as views of mountain backdrops from urban areas).

Although a determination of scenic value must often be made on a case-by-case basis, the following standards are intended to clarify the

identification of open space and other areas which should be preserved for their aesthetic value. The standards shown in Policy OR-50 recognize that some features should automatically be presumed to have open space value; in most cases, this recognizes the unique or limited extent of these areas, and the need to preserve the character (and the visual quality) of these features.

While many features are specifically considered "scenic," a variety of other areas and features within the County contain scenic values, and may need to be evaluated on a case-by-case basis. This category of features includes any outstanding feature, either natural or manmade, which is of scenic value due to its unique character, size, or general visual quality, and which is not considered automatically scenic. Examples include stands of timber, geologic formations, and smaller bodies of water, which can generally be considered scenic. Policy OR-50 contains criteria for features which may be considered scenic on a case-by-case basis.

#### B. Scenic Highways

In recognition of the visual quality of the areas through which they pass, the roadways listed in Policy OR-57 are designated as scenic routes by the County. In some instances, these roadways have also been designated as state scenic highways by the California Department of Transportation (Caltrans). In addition, the length of the "Rim of the World Highway," which includes portions of Highways 138, 18, and 38, has been officially designated as a Scenic Byway by the U.S. Forest Service.

In the County, scenic highways are subject to additional land use and aesthetic controls under the County's Scenic Highway Overlay.

Trails as delineated in Section 4 are also considered to be part of the County's scenic resources.

#### C. BLM Scenic Area

The Bureau of Land Management (BLM) has designated a vast area of 1.5 million acres in the east central portion of the County as the East Mojave National Scenic Area. This Scenic Area is shown on mapping included in the California Desert Conservation Area Plan, which is on file at the Office of Planning.

As part of its Back Country Byways program, the BLM has also begun a process to designate a number of roadways in remote desert areas as Back Country Byways, a designation which is intended to alert motorists to the scenic quality of these less-traveled routes. One of these routes, the Wild Horse Canyon Back Country Byway, was designated as the nation's first Byway.

Further information on the Back Country Byways program is referenced in the Open Space Background Appendix.

D. Scenic Resource Goals

The following are the Scenic Resource goals of the County.

C-55 Preserve and protect the outstanding scenic resources of San Bernardino County for their continued future enjoyment.

C-56 Restrict development along scenic corridors.

C-57 Provide for visual enhancement of existing and new development through landscaping.

E. Scenic Resource Policies/Actions

The following are the Scenic Resources policies and actions to be followed in support of the County's Scenic Resource Goals.

OR-50 Because a clear definition of scenic values is important to the County's goal of protecting the quality of existing visual resources, the County shall apply the following definitions of scenic value.

- a. Features meeting the following criteria shall be considered for designation as scenic resources:
  - i. A roadway, vista point, or area which provides a vista of undisturbed natural areas.
  - ii. Includes a unique or unusual feature which comprises an important or dominant portion of the viewshed (the area within the field of view of the observer).
  - iii. Offers a distant vista which provides relief from less attractive views of nearby features (such as views of mountain backdrops from urban areas).
- b. Features meeting the following criteria shall be specifically defined as scenic, unless a clear finding can be made that no scenic values are present:
  - i. Views of major mountain ranges or portions thereof. This specifically includes views of mountain ranges from urban or desert areas.
  - ii. All areas containing significant biological resources, as identified on the Biotic Overlay map.
  - iii. Areas within Bureau of Land Management Scenic Areas.

- iv. Areas within the East Mojave National Scenic Area.
- v. Areas within any National Monument, or listed as a National Landmark.
- vi. Sand dunes in the desert portions of the County, especially those considered part of the Kelso Dunes.
- vii. Stands of timber consisting primarily of old-growth timber, or timber which has not been harvested within the past 50 years.
- viii. Any natural blue-line stream, except those which have been channelized or lined with concrete.
- ix. Lava flows.
- x. Any lake or reservoir (uncovered) with a surface area of at least one acre.
- xi. Historic or culturally significant structures.
- xii. Regional Parks and their local access routes.
- xiii. Any portion of the regional trail system.
- xiv. All areas of critical environmental concern or special value identified by the County of San Bernardino, the Bureau of Land Management, the U.S. Forest Service, and the Southern California Association of Governments.

OR-51 Because the provision of scenic areas, trails and scenic highways is an integral part of the planning process, the County shall require the following:

- a. Review of proposed development along scenic highways and trails shown on the Resource Overlay Maps to ensure preservation of scenic values for the traveling public and those seeking a recreational driving experience.
- b. Define the Scenic Corridor to extend 200 feet on either side of the designated route, measured from the outside edge of the right-of-way, trail or path. Development along scenic corridors shall be required to demonstrate through visual analysis that proposed improvements are compatible with the scenic qualities present.

- c. Require removal of non-conforming signs per County sign ordinance standards for new uses or substantial revisions to existing uses.
- d. Along Scenic Routes, prohibit primary free standing signs, greater than 18 square feet. This shall include all primary free standing signs oriented to the scenic right-of-way.
- e. Require provision of vantage or vista points along scenic routes by new development proposed adjacent to those routes for scenic and interpretive displays and roadside rests.
- g. Require provision of ample and varied recreational and scenic opportunities by new development in coordination with local, state, and federal agencies, particularly for projects fronting state routes. This could include site design to preserve scenic vistas from parking lots to local or regional viewsheds.
- h. Encourage undergrounding of all utility facilities for all projects requiring discretionary or ministerial action.
- i. Require installation and maintenance of a minimum of 10% on-site landscaping which is drought tolerant and compatible with the regional environment and consistent with water conservation ordinances for all development, and particularly commercial and industrial development. Utilization of native trees and shrubs shall be incorporated and lawns shall not be permitted to cover more than 1/4 of total landscaped area requirements.
- j. Control development on prominent ridgelines.
- k. Allow new regional and community infrastructure on hilltops only when no alternative sites are available.
- l. Review site planning, including architectural design, to prevent obstruction of scenic views, and to blend with the surrounding landscape.
- m. Require compliance with grading and vegetation removal standards as set forth in the Scenic Routes Overlay District.

OR-52 Because preservation of scenic resources will require the application of specific standards and procedures, the County shall implement the following actions:

- a. Identify actions to enhance the natural beauty of canyons and natural drainage courses.
- b. Establish special site analysis requirements and development

standards to reduce the impact on the scenic qualities of the foothills.

- OR-53 Because preservation of scenic qualities is important to the County, development which would alter the character of visually significant resources should be prevented.
- OR-54 Because billboards and other on- and off-site advertising signs can substantially detract from the enjoyment of scenic vistas, the County apply the following policies:
- a. Limit the size, height and number of on-premise signs to the minimum necessary for identification.
  - b. Prohibit off-site advertising signs within and adjacent to all scenic corridors and where such signs would detract from the scenic qualities of any state or federally designated scenic area or scenic feature or any feature considered "scenic" as defined in this section.
- OR-55 Because the County desires to improve access to scenic vistas, the County shall seek to establish off-street pull-outs at designated view points where appropriate along scenic highways.
- OR-56 Because open space can promote neighborhood and civic identity by providing a clear definition to districts and neighborhoods, the County supports the use of open space and landscaping to define neighborhoods and district boundaries and to delineate edges between the natural and built environment.
- OR-57 Because the preservation of scenic qualities can in many cases be achieved only through the preservation of existing landform and natural features, the County shall require the following:
- a. Discourage residential development on land with slopes greater than 30 percent, ridge saddles, canyon mouths and areas remote from existing access.
  - b. Require that natural landform and ridgelines be preserved by using the following measures:
    - i. Keeping cuts and fills to an absolute minimum during the development of the area.
    - ii. Requiring the grading contours that do occur to blend with the natural contours on site or to look like contours that would naturally occur.

- iii. Encouraging the use of custom foundations in order to minimize disruption of the natural landform.
- iv. Requiring that units located in the hillsides be so situated that roof lines will blend with and not detract from the natural ridge outline.
- c. Require that hillside development be compatible with natural features and the ability to develop the site in a manner which preserves the integrity and character of the ~~forested~~ hillside environment, including but not limited to, consideration of terrain, landform, access needs, fire and erosion hazards, watershed and flood factors, tree preservation, and scenic amenities and quality.

OR-58 Because the County desires to retain the scenic character of visually important roadways throughout the County, the County shall designate the following routes as scenic highways, and apply all applicable policies to development within the Scenic Corridor.

- a. State Route 142 from Central Avenue to the Orange County line (Chino Hills Planning Area)
- b. State Route 71 (Chino Hills Planning Area)
- c. State Route 83/Euclid Avenue/Mountain Avenue from State Highway 71 to San Antonio Dam
- d. Mt. Baldy Road from Los Angeles County line northeast to Mt. Baldy
- e. Lytle Creek Canyon Road from Interstate 15 north to Lytle Creek
- f. State Route 138 from Crestline cutoff at State Route 18 to Los Angeles County line
- g. State Route 173 from State Route 18 to State Route 138
- h. State Route 18 from San Bernardino to Los Angeles County line
- i. State Route 38 from Interstate 10 to Big Bear Dam
- j. State Route 330 from State Route 30 to State Route 18
- k. Interstate 10 from State Route 38 to Riverside County line.
- l. Sunset Drive north and south
- m. Live Oak Canyon Road from Interstate 10 to Riverside County line
- n. Oak Glen Road from Oak Glen Planning Area boundary to Riverside County line
- o. Avenue F/Wildwood Canyon Road from Jefferson Street to Oak Glen Road (Yucaipa Planning Area)
- p. Crest Forest Drive from State Route 18 west to Sawpit Canyon Road (Crest Forest Planning Area)
- q. Playground Drive (Crest Forest Planning Area)
- r. Devil's Canyon Road (Crest Forest Planning Area)
- s. Sawpit Canyon Road/Sawpit Creek Road (Crest Forest Planning Area)
- t. Lake Gregory Drive (Crest Forest Planning Area)
- u. San Moritz Drive (Crest Forest Planning Area)
- v. Dart Canyon Road (Crest Forest Planning Area)

SECTION II  
Planning Issues

OPEN SPACE ELEMENT  
Scenic Resources

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- w. Grass Valley Road (Lake Arrowhead Planning Area)
- x. Kuffel Canyon Road (Lake Arrowhead Planning Area)
- y. Green Valley Lake Road (Hilltop Planning Area)
- z. Lone Pine Canyon Road (Wrightwood/West Cajon Valley Planning Area)
- aa. State Route 62
- bb. Interstate 40 from Ludlow to Needles
- cc. Interstate 15 north of the Fontana City Limit to Nevada State Line except those portions within the Barstow Planning Area and the community of Baker where there is commercial/industrial development and Interstate 215 north of the San Bernardino City Limit to the junction of Interstate 15
- dd. State Route 127
- ee. State Route 247/Old Woman Springs Road from State Route 62 to Barstow
- ff. Pioneertown Road (Yucca Valley Planning Area)
- gg. Baldwin Lake Road/Pioneertown Road/Burns Canyon Road (Bear Valley Planning Area)
- hh. Coxey Road/Rim-of-the-World Highway (Bear Valley Planning Area)
- \*ii. Kelbaker Road from Interstate 15 to Interstate 40
- \*jj. Kelso-Cima Road from Kelso to Cima
- \*kk. Cima Road from Interstate 15 to Cima
- \*ll. Essex Road from Essex to Mitchell Caverns
- mm. National Trails Highway from Oro Grande to Lenwood
- \*nn. Cedar Canyon Road from Kelso-Cima Road to Lanfair Road
- oo. State Route 2 from State Route 138 to Los Angeles County line
- pp. Cedar Avenue from Bloomington Avenue to Riverside County line (Bloomington Planning Area)
- qq. Soquel Canyon Parkway from State Route 71 to Orange County line (Chino Hills Planning Area)
- rr. Grand Avenue from State Route 71 to Los Angeles County line (Chino Hills Planning Area)
- ss. Chino Hills Parkway from Central Avenue to Los Angeles County line (Chino Hills Planning Area)
- tt. Orange Street within the Redlands sphere of influence
- uu. San Bernardino Avenue within the Redlands sphere of influence
- vv. Mentone Blvd. within the Redlands sphere of influence
- ww. Colton Avenue within the Redlands sphere of influence
- xx. Citrus Avenue within the Redlands sphere of influence
- yy. Highland Avenue within the Redlands sphere of influence
- zz. Fifth Avenue within the Redlands sphere of influence
- aaa. Crafton Avenue within the Redlands sphere of influence
- bbb. San Timoteo Canyon Road within the Redlands sphere of influence
- ccc. Beaumont Avenue within the Redlands sphere of influence
- ddd. Barton Road within the Redlands sphere of influence
- eee. Orange Avenue within the Redlands sphere of influence
- fff. Nevada Street within the Redlands sphere of influence
- ggg. Iowa Street within the Redlands sphere of influence
- hhh. Alabama Street within the Redlands sphere of influence

- iii. Tennessee Freeway (State Route 30) within the Redlands sphere of influence
- jjj. Live Oak Canyon Road, that portion from I-10 to the western border of the Yucaipa Planning area.
- kkk. Wildwood Canyon Road, that portion from Holmes Street to the eastern boundary of the Yucaipa Planning area.
- lll. The portion of Interstate Highway 10 which traverses through and lies within the Yucaipa Planning area.
- mmm. Oak Glen Road, that portion from Wildwood Canyon Road to the northern boundary of the Yucaipa Planning area.
- nnn. Lytle Creek Canyon Road
- \*ooo. Black Canyon Road
- \*ppp. Lanfair-Ivanpah Road
- qqq. Wilson Avenue, Rancho Cucamonga Sphere of Influence
- rrr. Day Creek Boulevard, Rancho Cucamonga Sphere of Influence

- \* Designated by the BLM as a part of their Back County Byway Program, a component of the National Scenic Byway system.

SECTION 9. PUBLIC HEALTH AND SAFETY

An important function of open space is its use as a buffer to separate people and buildings from intermittent or persistent hazards which could cause injury, damage, or death. This section of the Open Space Element deals with this type of open space: land which must be set aside to protect the health and safety of the public.

This category of open space includes both areas which are set aside to distance persons and buildings from hazardous situations (such as earthquake faults or flood-prone areas) and open land which is itself part of a system built to protect health and safety (such as flood control channels or basins). Also included in this category of open space are land uses which are required as part of the overall functioning of modern society and which include or require undeveloped land as a resource or a buffer; this includes landfills and airports.

As discussed in Section 2 of this Element, open space lands which have been set aside to protect public health and safety also have the potential for other uses. Lands along fault lines, for instance, can be retained in their natural condition as wildlife corridors; lands within pipeline rights of way can be used as trail easements; flood control facilities may be suitable for use as natural open space, mineral extraction, or recreation.

A. Major Open Space Areas for Public Health and Safety

The following sections discuss various types of open space which are required to protect the public health, safety, and welfare.

1. Principal Faults (Active and Potentially Active)

Like most of California, San Bernardino County is in a geologically active area. Numerous faults, some with the potential for severe ground movement, are located in all regions of the County, including the urbanized Valley and high desert areas.

Sources of information on earthquake faults are referenced in the Open Space Background Appendix.

For specific policy direction related to earthquake faults and fault zones, refer to County Open Space Goal C-58 and Policy OR-59.

2. Severe Soil Limitations for Septic Tanks

Soils with limitations on their use for septic tank leach fields can place constraints on development if no municipal wastewater treatment is available, and can therefore be used as an indicator of areas in which no or reduced development should be allowed. In these areas, open space may

be retained either through very low building density or the prohibition of development to protect public health. Urbanized or urbanizing areas with soil types unsuitable for septic tank installation include the east Valley region, the "Rim of the World" area from Crestline to Running Springs, and the Big Bear area. Some of the soils in the Desert region pose substantial constraints on the development of septic systems.

Further information on areas with soils which constrain the construction of septic tank leach fields is referenced in the Open Space Background Appendix.

County Policy OR-70 seeks to direct growth away from areas without sewer service and the ability to support septic systems.

### 3. Slide Prone Areas

Areas subject to hazards from landslides can be used to provide open space, since development in these areas—if it is allowed—generally occurs at low densities. In general, these areas coincide with areas of fragile soils, which are discussed in the Natural Resources section of this Element.

Further information on slide-prone areas is referenced in the Open Space Background Appendix.

Policies dealing with development in areas subject to landslide hazards are contained in the Geologic section of the General Plan.

### 4. Dams

Dams relate to open space in several ways. In many cases, dams create reservoirs which can be used as a scenic or recreational resource (or both). Dams also in many cases place constraints on development within the defined area of inundation which would result from dam failure; in some cases, these lands can be retained as open space.

The largest dam in the Valley region is Prado Dam, although several other dams (primarily associated with flood control projects) are located on major north-south drainage channels. In the Mountain region, Lake Silverwood, Lake Arrowhead, Big Bear Lake, Green Valley Lake, as well as many smaller bodies of water, are retained by dams. In the Desert region, the dam Mojave River Forks is the only major structure of its kind.

Further information on the location of dams and their inundation areas is referenced in the Open Space Background Appendix.

County Policy OR-48 seeks to improve public access to all bodies of water, including lakes created by dams.

## 5. Channels

Channels, which in many cases traverse developed areas, have in many cases been constructed to protect public health and safety by directing floodwater; others have been constructed to provide irrigation water to agricultural areas. In many cases, channels have the potential for use as scenic resources or as parts of a local or regional trail system (if trails can be provided on the channel banks or bottoms). Channels are located throughout the Valley region, where they form an important part of the flood control system. The only major channel system in the Desert region is located north of Highway 62 near Yucca Valley.

Sources of information on the location of channels are referenced in the Open Space Background Appendix.

Policy OR-69a supports the use of channels as open space and/or trail areas.

## 6. Levees

Levees, like channels, have been created to protect public health and safety by preventing flooding of low-lying areas. Since levees in many cases pass through developed areas, and since they are generally constructed to allow vehicular access, the potential exists that these features can be used as parts of a local or regional trail system.

In the Valley region, major levee systems have been built along the courses of many major drainages, including the Santa Ana River. No major levee systems exist in the Mountain or Desert regions.

Further information on the location of levees in the County is referenced in the Open Space Background Appendix.

Policy OR-69a supports the use of levees as open space and/or trail areas.

## 7. Areas Subject to Flooding

Since development in areas subject to flooding is in most cases severely constrained or entirely prohibited, and since these areas often lie within river bottoms which contain natural habitat, these areas have the potential for retention as permanent open space for resource protection, recreation, or other uses requiring open space.

Sources of information on areas subject to flooding are referenced in the Open Space Background Appendix.

Specific policy direction supporting the use of flood hazard areas as permanent open space is contained in Policy OR-68.

#### 8. Prado Dam Inundation Area

As part of a multi-agency program to provide flood protection to large areas in Orange County along the Santa Ana River, the level of Prado Dam will be raised, allowing the dam to hold more floodwater in the event of a major storm. One result of the raising of Prado Dam is that the area subject to flooding during a major storm will be substantially increased. Since no structures can be located in this "inundation area," a program has been initiated to purchase land within this area from private owners. Lands purchased will be retained as public open space.

Sources of information on the Prado Dam inundation area are referenced in the Open Space Background Appendix.

Policy OR-67 supports retention of the inundation area as permanent open space.

#### 9. Seven Oaks Dam "Borrow Sites"

As part of the construction of the Seven Oaks Dam on the upper reach of the Santa Ana River, two areas north of the community of Mentone have been designated as "borrow areas" for pervious and impervious materials which will be used in the construction of the dam. These areas will be mined for fill material during the construction of the dam, and have the potential to be used as open space following construction. Like other mining sites (as discussed elsewhere in the Managed Production of Resources section of this Element), these borrow sites have the potential to be used as open space after mining ceases.

Sources of information on the borrow areas are referenced in the Open Space Background Appendix.

Policy direction supporting the ultimate use of the borrow sites as permanent open space, is listed in the Valley Region section of this General Plan.

#### 10. Aqueducts (State water project, Colorado River, etc.)

Portions of two major aqueducts--the California Aqueduct and the Colorado River Aqueduct--traverse portions of the County.

The California Aqueduct passes through the southwest portion of the County; the Colorado River Aqueduct traverses a portion of the Desert region west of Lake Havasu.

Aqueducts provide open space opportunities similar to those offered by channels and levees. These features, which traverse vast distances, can in some areas be used either for recreation (primarily fishing) or as

portions of a local or regional trail system.

Sources of information on the locations of aqueducts are referenced in the Open Space Background Appendix.

Policy OR-68 supports the use of aqueducts as trail alignments where possible.

#### 11. Utility Easement Corridors, Railroads, and Major Pipeline Easement Corridors

Since they cross vast areas and often pass through urbanized portions of the County, utility easements and corridors, including rail lines, have the potential to serve as important links in an overall open space and trails system. Rail corridors in particular, due to their very mild grades and generally good access in urban areas, have been identified as important potential trail alignments. Rail corridors are found in many areas of the County, and are concentrated where they traverse mountain passes, such as the Cajon Pass in San Bernardino County and the Banning Pass in Riverside County.

A national organization, the Rails to Trails Conservancy, has been established specifically to facilitate the conversion of abandoned or seldom-used railway lines as trails, and has aided in the successful conversion of thousands of miles of railway lines. In California, 18 trails, totaling some 115 miles, have been constructed.

Information on the locations of energy and railway corridors are referenced in the Open Space Background Appendix.

Specific policy direction supporting the use of utility corridors as public open space and trail alignments is contained in Policy OR-69.

#### 12. Landfills

A number of active, inactive, and closed landfills are located in both the urbanized and rural portions of the County. In addition, a number of landfills which were begun and operated without official permits are located in some areas.

Although landfills are often considered a community blight, they have the potential, given proper planning, to become relatively inoffensive. In addition, closed landfills, which cannot generally be used for development purposes, have the potential to become permanent open space areas. A number of cities in California and throughout the nation have completed the conversion of closed landfills into attractive open space amenities. The Regional Parks Department has begun planning the conversion of the Agua Mansa landfill in Colton to a recreation amenity when that facility closes.

Information on the locations of active and closed landfills is referenced in the Open Space Background Appendix.

Specific policy direction supporting the use of closed landfills as permanent open space for recreation and other uses is contained in General Plan Policy SW-2.e (in the Solid Waste section).

### 13. Airports/Military Facilities

Airports are discussed in this Open Space Element because they are a land use which requires large areas of open land (within the airport) and even larger areas of relatively undeveloped land for use as clear zones. With the enactment of recent federal legislation seeking to close two military air bases within the County, the potential also exists that some of the land within these installations can be retained as open space as part of an overall strategy to establish private uses.

Major civil airports located within San Bernardino County include the following:

- Apple Valley Airport
- Barstow-Daggett Airport
- Big Bear City Airport
- Cable Airport
- Chino Airport
- City of Needles Airport
- El Mirage Field
- Hesperia Airport
- Ontario International Airport
- Redlands Airport
- Rialto Airport
- Yucca Valley Airport (see Section II-B, Aviation Safety)

In addition, the following military bases are located within the County.

- Edwards Air Force Base
- George Air Force Base\*
- Norton Air Force Base\*

\* Norton AFB and George AFB have been included in the recommended closure list by the Federal Commission on Base Realignment and Closure.

Information on airports is contained in the "Transportation/ Circulation" section of the General Plan. The location of mapped information for airports is referenced in the Open Space Background Appendix. Specific policy direction supporting the use of closed airports as permanent open

space is discussed in the Open Space/Health and Safety Policies.

County Policy OR-69c supports the use of closed airports or portions thereof as permanent open space.

#### B. General Plan Goals Related to Public Health and Safety

The following General Plan Goal is referenced to highlight policy direction in another portion of the General Plan which relates to open space issues.

Solid Waste Management: Goal D-9

##### 1. General Plan Policies Related to Public Health and Safety

The following policies, which are contained in other chapters of the General Plan, are referenced here to highlight County policy direction which relates to open space issues.

Solid Waste Policies: Policy SW-2.e

Land Use/Growth Management Policies: Policy LU-1.a, .b, .d, .e, .f, .g

#### C. Public Health and Safety Goal

The following is the County's goal related to open space for public health and safety.

C-58 Utilize open space areas to protect residents and structures from manmade and natural hazards, such as earthquake faults and buried pipelines.

#### D. Public Health and Safety Policies/Actions

The following countywide open space policies and actions are specifically related to Countywide Open Space Goal C-58, as well as to other County goals.

The following policies are presented in this Open Space section of the General Plan to specifically address open space/trails issues related to public health and safety, and to guide decisions to coordinate planning for public health and safety with open space issues.

OR-59 Because public health and safety can be protected through the use of open space, the County may maintain open space where flood, fire, geologic, seismic hazards, noise, or other conditions may endanger public health and safety.

- OR-60 Because pipeline easements have value as potential open space corridors, and require separation from residential and other uses, the locations of all known petroleum and other buried and above-ground pipelines shall be shown on the Hazards Overlay Map.
- OR-61 Because public health and safety can be protected by providing buffers along the routes of pipelines carrying flammable materials, the County shall establish appropriate setbacks from any known petroleum product pipeline.
- OR-62 Because retaining drainage courses in their natural condition retains habitat, allows some recharge of groundwater basins, and can result in savings related to the cost of constructing engineered drainage facilities, the County shall apply the following policies:
- a. Seek to retain all natural drainage courses where health and safety is not jeopardized.
  - b. Prohibit the conversion of natural watercourses to culverts, storm drains, or other underground structures except where required to protect public health and safety.
  - c. Encourage the use of natural drainage courses as natural boundaries between neighborhoods.
  - d. Allow no development in the FW District and/or Flood Plain Overlay District(s) which would alter the alignment or direction or course of any blue-line stream.
  - e. When development occurs, maintain the capacity of the existing natural drainage channels where feasible, and flood proof structures to allow 100-year storm flows to be conveyed through the development without damage to structures.
  - f. Consistent with the County's efforts to protect the public from flood hazards, encourage the use of open space and drainage easements, as well as clustering of new development, as stream preservation tools.
  - g. Where technically feasible as part of its efforts to protect residents from flood hazards, require naturalistic drainage improvement where modifications to the natural drainage course are necessary. As an example, channel linings which will allow the re-establishment of vegetation within the channel may be considered over impervious linings (such as concrete). Where revegetation is anticipated, this must be addressed in the channel's hydraulic analysis and the design of downstream culverts.

- h. Where technically feasible, encourage channel designs including combinations of earthen landscaped swales, rock rip-rap lined channels or rock-lined concrete channels. Where adjacent to development, said drainage shall be covered by an adequate County drainage easement with appropriate building setbacks established therefrom.
- i. Do not place streams in underground structures where technically feasible, except to serve another public purpose and where burial of the stream is clearly the only means available to safeguard public health and safety.
- j. Prohibit occupation or obstruction of natural drainage courses.

OR-63 Because achievement of the County's goals related to protecting open space lands which lie within drainage courses will be furthered by the application of consistent policies by all County departments, the County Flood Control District may adopt and implement specific policies regarding the operation of the County Flood Control District consistent with the overall intent of this Open Space Element.

OR-64 Because the County seeks to preserve open space lands with special values while directing development into appropriate areas, the County shall encourage the exchange of publicly owned land within the planning area for private land better suited for watershed protection and open space value.

OR-65 Because providing separation between developed lands and floodways can both preserve open space lands and protect public health and safety, the County may require a minimum 50 (fifty) foot building setback from all natural drainage courses except where a greater setback is specified by the Environmental Management Group or where the Environmental Management Group indicates a deviation from the minimum setback would not result in a hazard to the public safety or damage to natural vegetation or habitat values.

OR-66 Because the recharge of groundwater basins is vital to the supply of water in the County, and because these areas can function only when retained in open space, the County shall consider retaining existing groundwater recharge and storm flow retention areas as open space lands.

OR-67 To protect public safety, the County shall seek to retain areas within the Prado Dam inundation area as permanent, public open space. Consideration shall be given to retain this area as natural open space wherever possible.

- OR-68 To protect public safety, the County shall support the use as permanent open space of areas within flood hazard zones which are not suitable for development of permanent structures or mining operations.
- OR-69 Because the County seeks to maximize the use of open space lands, where possible, the following policies shall apply:
- a. Consistent with safety and operational considerations, support the use of channels, levees, aqueduct alignments, and similar linear spaces for open space and/or trail use.
  - b. Where possible, consistent with safety and operational considerations, encourage the use of active and inactive utility easement corridors--especially railway corridors which have gentle grades which make them suitable for whole-access trails--as public open space areas and trail alignments.
  - c. Support the re-use of closed airports or military bases, or portions thereof, as permanent public open space areas.
- OR-70 Because public health and safety are endangered through the establishment of urban uses without adequate sewer service, the County shall seek to direct urban development away from areas which are not served by domestic sewer systems, and in which soils cannot adequately support septic tank/leach field systems.



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*[The following text is extremely faint and largely illegible. It appears to be a multi-paragraph document, possibly a letter or a report, discussing various topics. The text is mirrored across the page, suggesting it might be a scan of a document with bleed-through or a very low-quality scan.]*

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